Results in Shoring

W. F. WALKER, JR.,
EASTERN MANAGER,
631 CALVERT BUILDING,
Phone: Plaza 1699
BALTIMORE, - - MD.

ROOSHOR

1927

Introduction

Added profit by the elimination of waste is the prime motive of every business concern. This is especially true of the Building Industry where competition is keen, where speed at low cost is demanded, and owing to the prevalence of high labor and material costs.

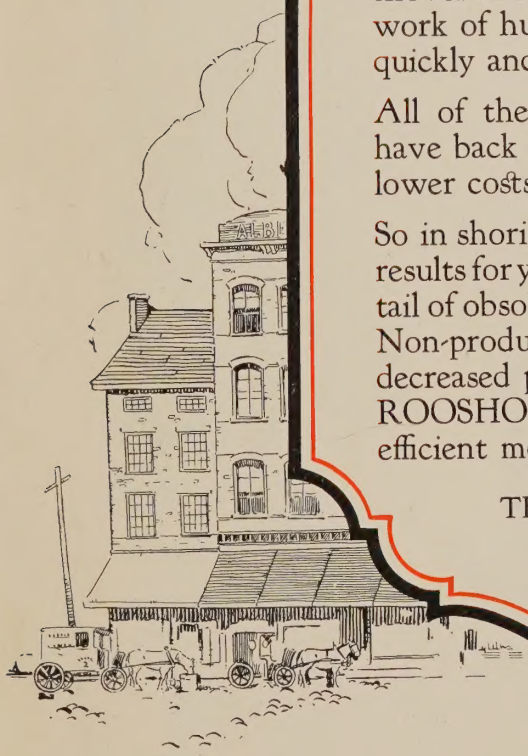
Construction methods today are far different from those used twenty years ago—machine methods are replacing, at lower costs, obsolete hand methods. What was once looked upon as an efficient method of construction is today considered crude. The up-to-date concrete mixer has replaced the shovel and hoe. The steam shovel does the work of hundreds of men by excavating far more quickly and at lower cost.

All of the evolutions in construction methods have back of them the idea of getting results at lower costs.

So in shoring your forms, ROOSHORS will get results for you because they eliminate the useless detail of obsolete methods by simplified construction. Non-productive labor and wasted lumber mean decreased profits. The Building Industry to which ROOSHORS are dedicated, is ever awake to more efficient methods and the elimination of waste.

THE H. W. ROOS COMPANY
2036-2046 Dana Avenue
Cincinnati, O.

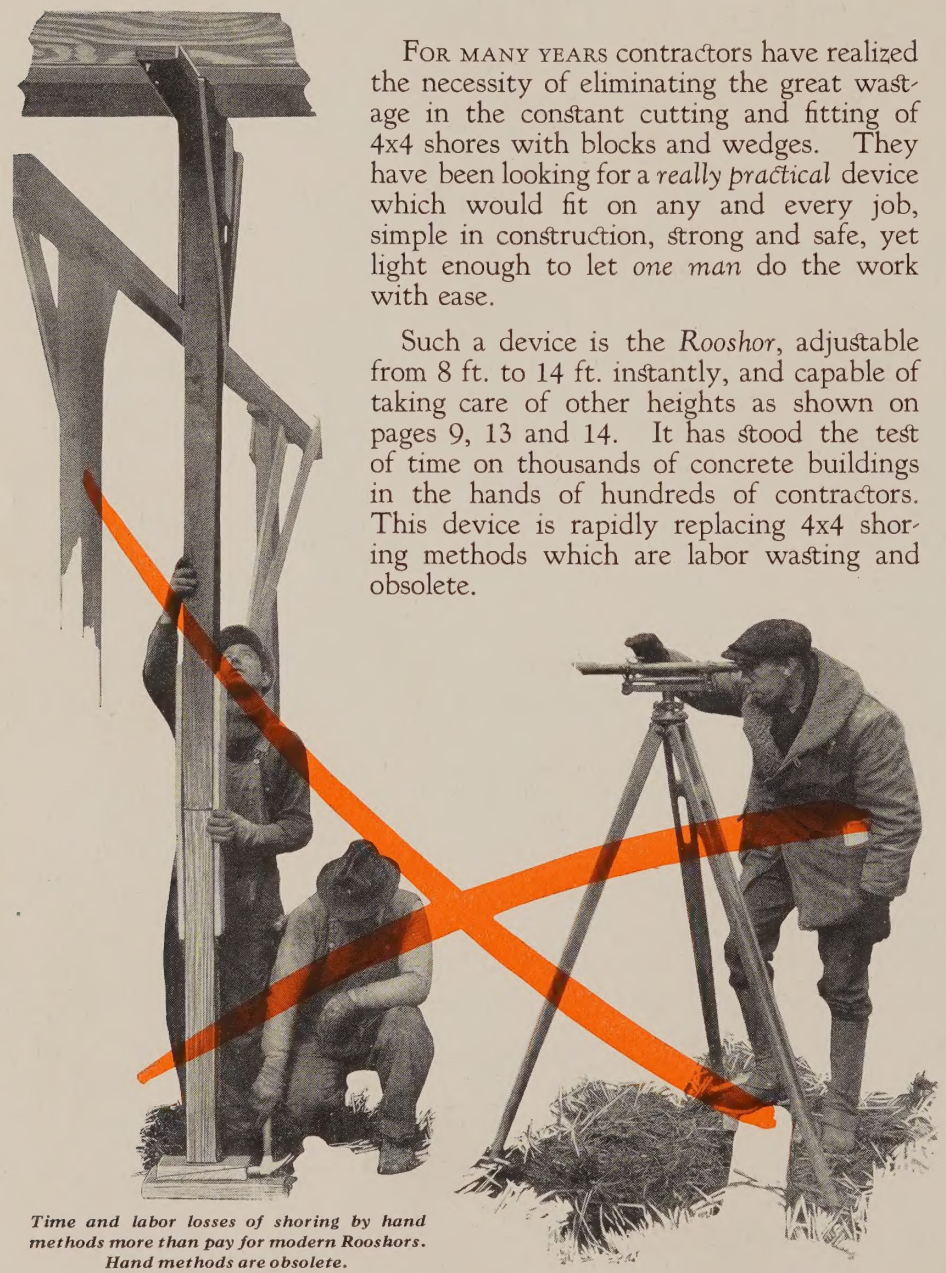
COPYRIGHTED, 1926



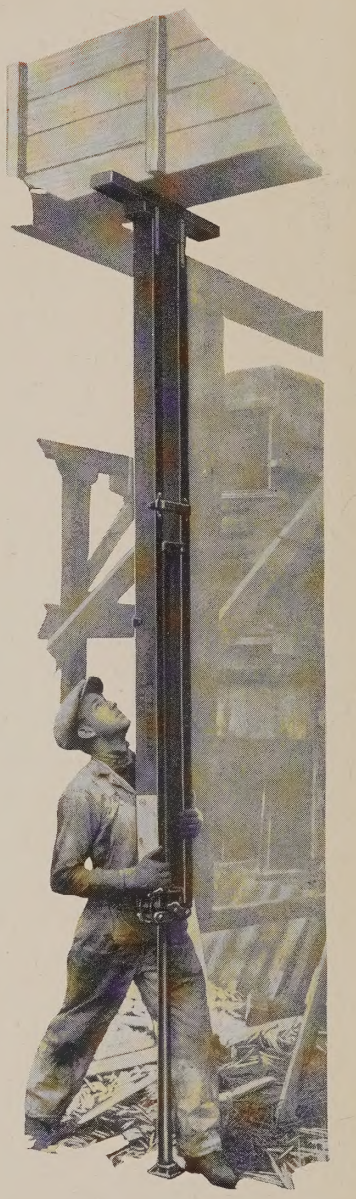
The One Man Shore that Saves Time and Labor

FOR MANY YEARS contractors have realized the necessity of eliminating the great wastage in the constant cutting and fitting of 4x4 shores with blocks and wedges. They have been looking for a *really practical* device which would fit on any and every job, simple in construction, strong and safe, yet light enough to let *one man* do the work with ease.

Such a device is the *Rooshor*, adjustable from 8 ft. to 14 ft. instantly, and capable of taking care of other heights as shown on pages 9, 13 and 14. It has stood the test of time on thousands of concrete buildings in the hands of hundreds of contractors. This device is rapidly replacing 4x4 shoring methods which are labor wasting and obsolete.



Time and labor losses of shoring by hand methods more than pay for modern Rooshors. Hand methods are obsolete.

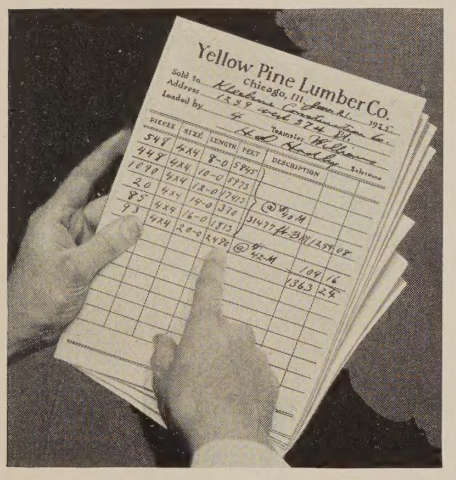


One man carries, erects and fits any Rooshor instantly in any location.

CHICAGO, ILL.

Our foremen are always asking for *Rooshors* instead of 4x4s as they claim their costs are less with these shores.
Ralph Sollitt & Sons Co.

Office detail in listing sizes of shoring requirements takes time and costs money. Much detail is necessary and mistakes are common.



Lumber bill for 4 x 4s is quite an item and is mostly scrap when the building is completed.

The Old 4x4 Method

When the contractor uses hand methods in shoring forms with 4x4s, he proceeds about as follows:

He studies the drawings and lists the shores for each floor, beam, lintel, and slab, as well as the elevation of the ground or floor on which the first shores will rest. The shore lengths are noted. Floor heights must be listed and the various sizes grouped. Often there are twenty-five to fifty shore lengths. This requires time and money.

Next, he buys his lumber or selects the proper lengths from his pile of old shores. How many times does it happen that old shores are not of proper length for his contracts? And if they are—are they available. What will it cost to get them ready? Using new material often costs less in time and labor than making over old shores. Time means payroll, and costs mount steadily in using old materials.

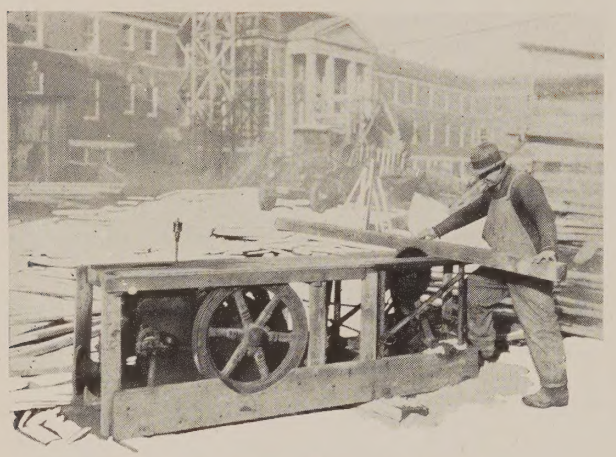
Then comes hauling. This means handling and re-sorting several times, which also means payroll.

Hauling and handling of the necessary lumber where 4 x 4s are used is slow, heavy and expensive work.

INDIANAPOLIS, IND.

Rooshors are saving us time and money in the erection and stripping of shores. They readily fit floors of different heights. *Hall Construction Company.*

The Old 4x4 Method



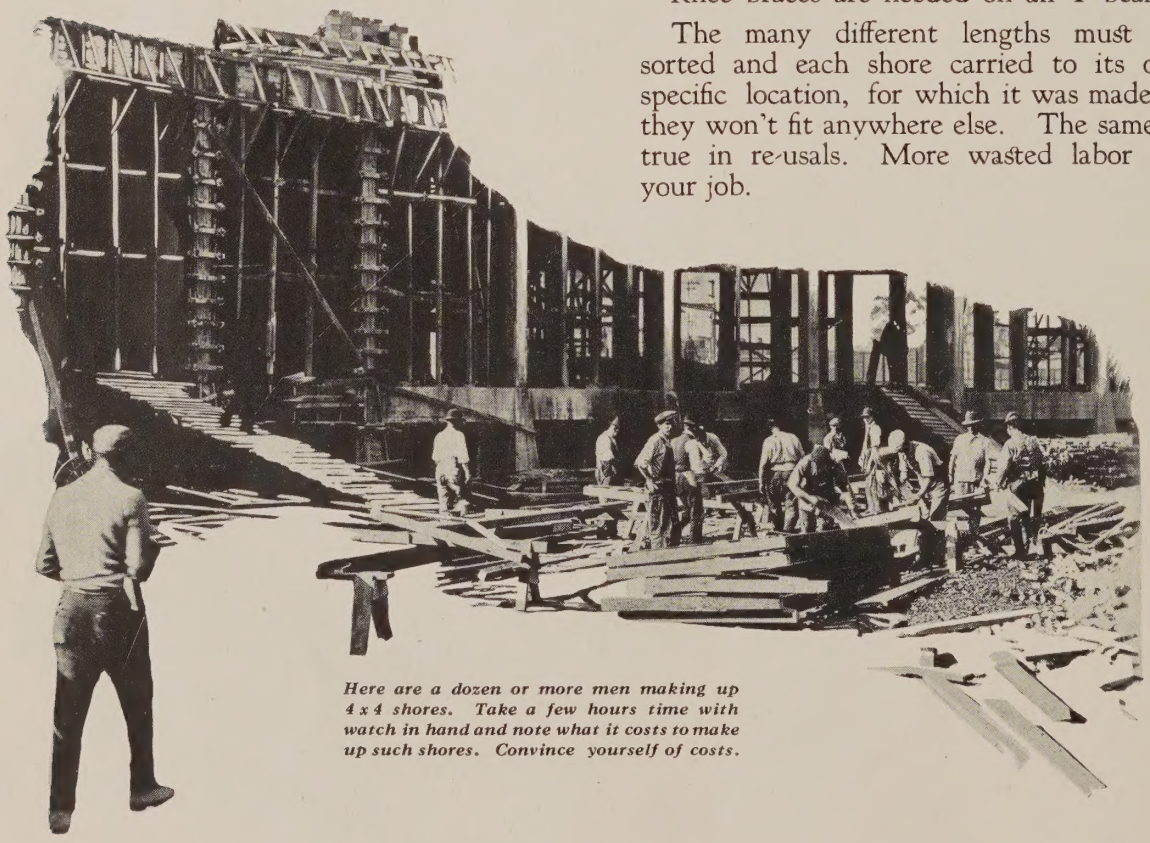
Erection of saw rig, and necessity of carrying 4x4s to and from same is an expensive part of the cost of using 4x4 shores.

IN ORDER to make up 4x4 shores you need a proper working space, benches, saws, scrap materials for making up the many necessary heads, knee braces and scabs, wedges, etc. Saws must be filed and hatchets sharpened often. Tools must be put into working order and kept so. In fact, many details must be taken care of. More costs are added at every step.

Then the big job of making 4x4 shores. Often in crowded sections of a city it is not possible to find enough room on the job to make shores and a separate lot must be rented for making and storing materials. It would be well to keep the cost of making 4x4 shores for any job.

Knee braces are needed on all T beams.

The many different lengths must be sorted and each shore carried to its one specific location, for which it was made—they won't fit anywhere else. The same is true in re-usals. More wasted labor for your job.



Here are a dozen or more men making up 4x4 shores. Take a few hours time with watch in hand and note what it costs to make up such shores. Convince yourself of costs.

LOUISVILLE, KY.

Rooshors cut our costs materially. We estimated eight days to a floor; *Rooshors* did the work in six days to a floor and we are now up five stories high. *L. W. Hancock.*

The Old 4x4 Method

When the time comes to set up and put the 4x4 shores in place you discover that Bill Smith made an error in listing, or Tom Jones in making, or John Doe in piling the 4x4 shores, and they will not fit. Delays occur —time is lost—payroll goes on. Six men stand around and wait until a piece is sawed off the shore to make it fit, or a few more blocks are found before the shore can be set up. The mistake of one man will waste the time of the whole setting crew or possibly $6.00 per hour. How many times does this happen? Thousands. What does it cost? Consult your payroll or time your men for an hour or two on any job. It will pay you.

Then comes the changing of 4x4 shore lengths for re-use—splices or cut-offs—due to the varying story heights, beam depths, and slab thicknesses. These operations cost money and slow down your work.

Carrying and sorting various lengths of 4x4 shores is heavy, slow work and often an awkward job.

Splices and cut-offs on 4 x 4 shores are an expensive part of all jobs.

Two men are usually necessary to set 4 x 4 shores. Correlation of three or more units — the shore, blocks and wedges—takes time and costs money.

DENVER, COLO.

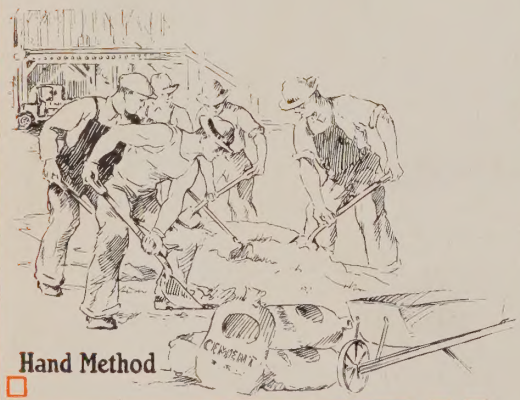
A decided improvement over the 4x4 method. Through the use of 1,100 *Rooshors* we find that a great saving has been effected.

F. J. Kirchhof Construction Company.

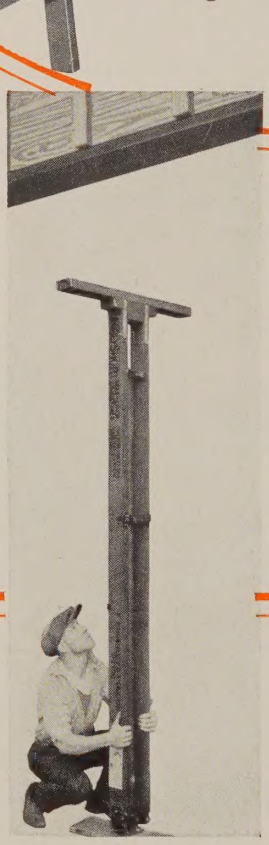
Operating and Adjusting the Rooshor

HERE ARE SIX PICTURES showing the simplicity and ease of setting and removing *Rooshors* on any and every job. Look them over. Simple, isn't it?—like having a timber which you could stretch. With *Rooshors* there is a constant duplication of like operations on which costs can be figured to the penny. Any *Rooshor* fits anywhere; adjustable in place; no wedging. No mistakes can be made. Every *Rooshor* works all the time, therefore fewer shores are necessary. It's just simply a little machine for shoring forms instead of using hand labor.

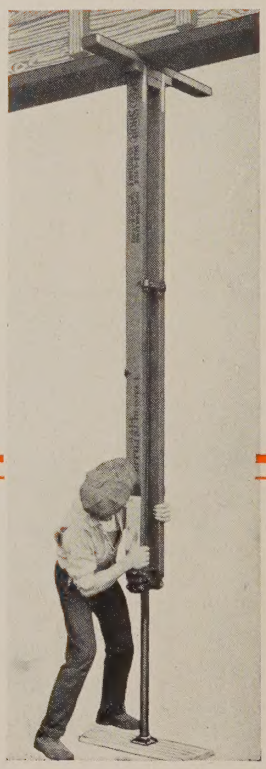
One pile Rooshors replaces many sizes of 4x4s. Take any Rooshor and carry to position.



Hand Method



Set Rooshor upright ready to raise.



Raise upper member to approximate height.

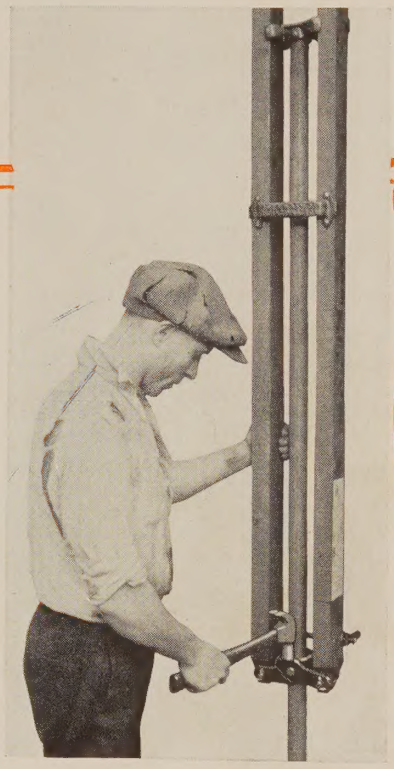
NEW YORK CITY, N. Y.

Rooshors fit quickly into place and they are saving us time and money.

Northeastern Construction Co.

One Man can Easily do Both

THINK OF HAVING only one pile of shores to fit all conditions year in and year out—a standardization of all shoring problems. A large percentage of shores supporting a slab at 10 ft. can be re-used on the very next slab at 14 ft. You can estimate your shoring requirements for almost any job in a few minutes. Each *Rooshor* will take care of 20 to 30 sq. ft. of floor area depending on the job. Fewer *Rooshors* are necessary with the same spacing, due to their adjustability feature, and each one is doing 100 per cent. duty all the time.



To release merely strike yokes with Hammer.

Remove Jack and Rooshor is set.

Apply Jacking Device which slips on and off instantly. Jack to final position.

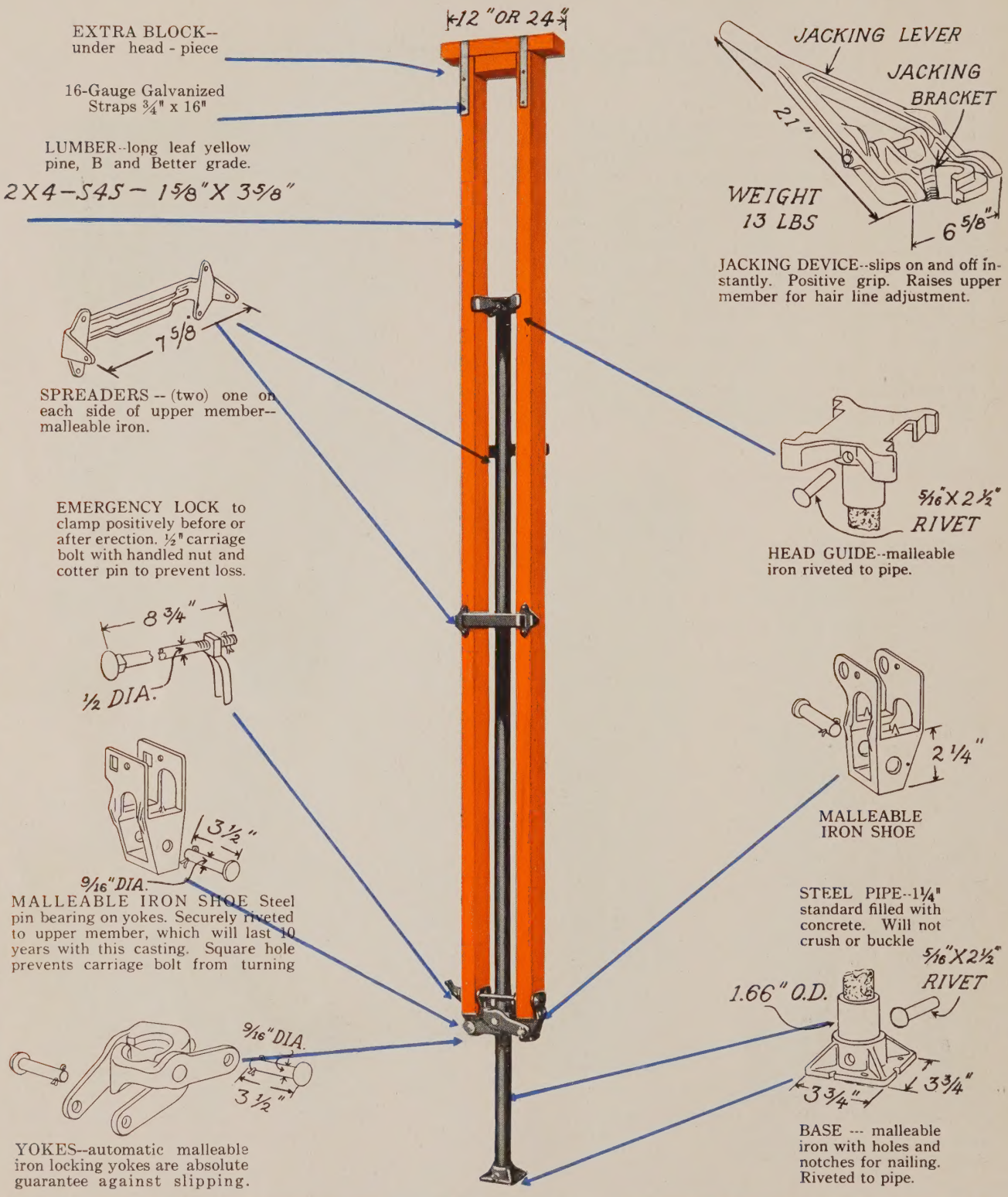
Machine Method

ATLANTA, GA.

Rooshors are very satisfactory; are pouring two floors per week and at a reduced labor cost. They can be adapted to any floor height.

Foundation Company

See Page 31 for Rooshor Repair Parts


12" OR 24"
EXTRA BLOCK--under head - piece
16-Gauge Galvanized Straps ¾" x 16"
LUMBER--long leaf yellow pine, B and Better grade.
2X4-S4S - 1⅝"X 3⅝"
JACKING LEVER
JACKING BRACKET
21"
WEIGHT 13 LBS
6 5/8"
JACKING DEVICE--slips on and off instantly. Positive grip. Raises upper member for hair line adjustment.
7 5/8
SPREADERS -- (two) one on each side of upper member--malleable iron.
EMERGENCY LOCK to clamp positively before or after erection. ½" carriage bolt with handled nut and cotter pin to prevent loss.
5/16"X 2½" RIVET
HEAD GUIDE--malleable iron riveted to pipe.
8 3/4"
½ DIA.
2 1/4"
MALLEABLE IRON SHOE
3½"
9/16" DIA.
MALLEABLE IRON SHOE Steel pin bearing on yokes. Securely riveted to upper member, which will last 10 years with this casting. Square hole prevents carriage bolt from turning
STEEL PIPE--1¼" standard filled with concrete. Will not crush or buckle
5/16"X2½" RIVET
1.66" O.D.
9/16" DIA.
3½"
3 3/4"
3 3/4"
YOKES--automatic malleable iron locking yokes are absolute guarantee against slipping.
BASE --- malleable iron with holes and notches for nailing. Riveted to pipe.

ST. PETERSBURG, FLA.

We are very much pleased with *Rooshors* and find them easily worked and adjusted.

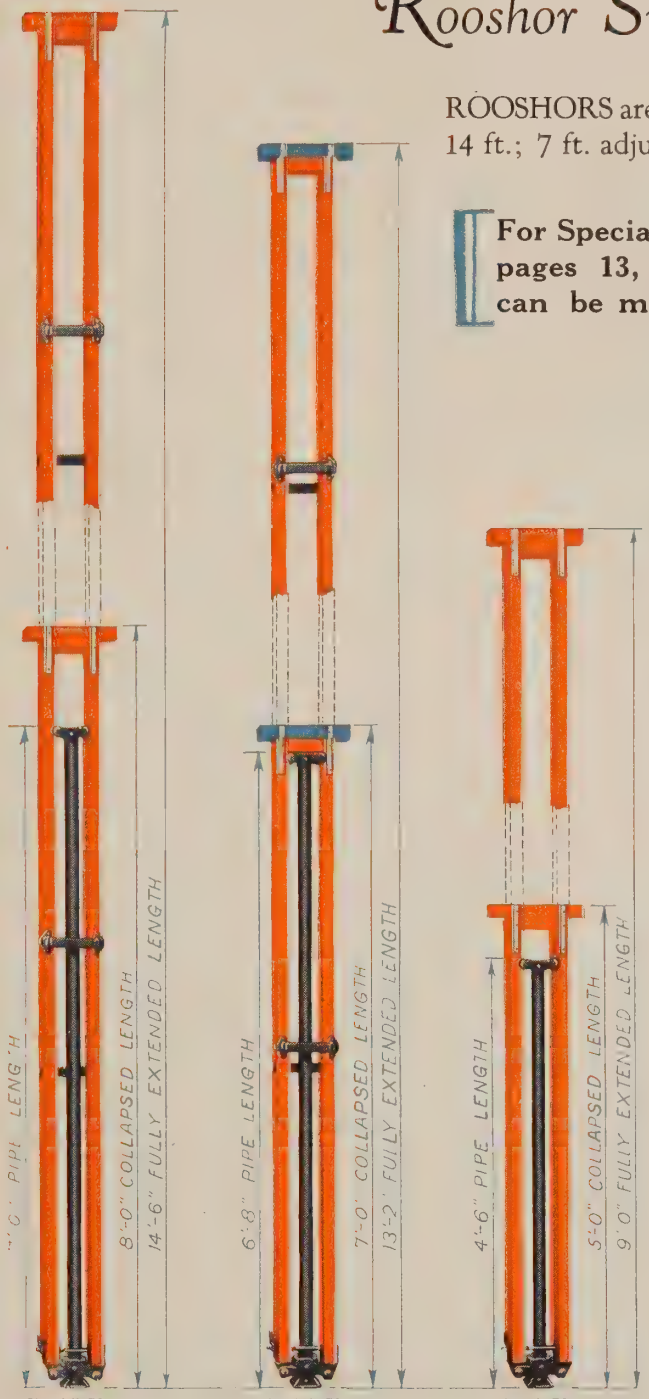
Geo. A. Fuller Co.

See Page 31 for Rooshor Repair Parts

Rooshor Sizes

ROOSHORS are stocked in three sizes: 8 ft. adjustable to 14 ft.; 7 ft. adjustable to 13 ft.; 5 ft. adjustable to 9 ft.

For Special Heads and Attachments see pages 13, 14 and 17. Special shores can be made up to fit any requirement.



8'—14' Size Wt. 66 lbs. *7'—13' Size Blue Heads Wt. 64 lbs.* *5'—9' Size Wt. 46 lbs.*

Patented in U. S. August 22, 1916, February 15, 1921, May 9, 1922 Also Patented in Foreign Countries

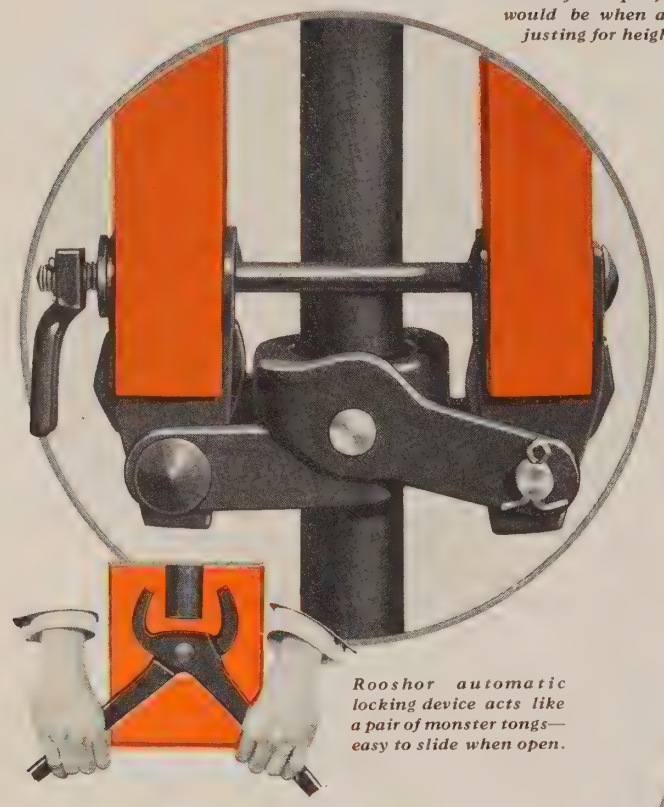
2½-inch extension is needed for jacking device application.

Pinch bar instead of jacking device may be used when shore is fully collapsed.

SALINA, KANS.

The boys report favorably regarding *Rooshors;* will soon get some more of them. (Bought three lots—24, 150, and 200. *Peterson Construction Company.*

This shows Rooshor automatic locking device jaws open, as would be when adjusting for height.



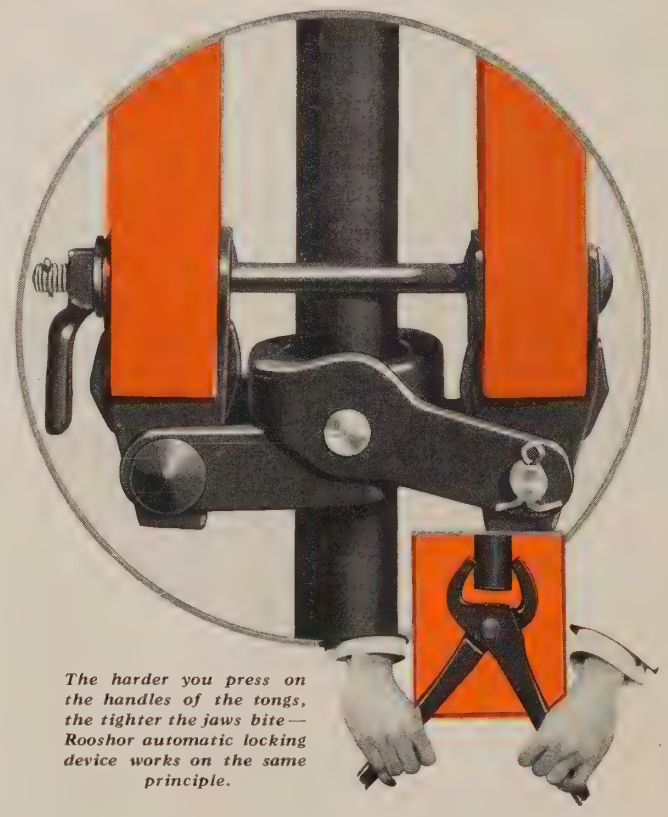
Rooshor automatic locking device acts like a pair of monster tongs—easy to slide when open.

The Rooshor Lock

The *Rooshor* lock absolutely insures safety in operation because at all times you have a pressure three times as great as is necessary to prevent slipping. "*The greater the load, the greater the grip.*"

The ratio of load on the shore to the grip on the pipe is 12 to 1—in other words when a load of 1000 lbs. is applied on the shore, the locking jaws exert a grip of 12,000 lbs. on the pipe. It is automatic and cannot slip.

As the load is applied, the heavy iron jaws are automatically closed so as to bite the concrete filled pipe An absolutely automatic lock.



The harder you press on the handles of the tongs, the tighter the jaws bite—Rooshor automatic locking device works on the same principle.

Rooshors are equipped with a **double** lock. In addition to the automatic lock, which is described above, *Rooshors* are equipped with an **emergency lock** consisting of the handled nut and bolt arrangement which keeps the shore locked at any given height. This is very important as a safety measure against vibrating loads caused by buggying concrete, nailing cross braces, placing steel, etc. A blow against the main lock of the *Rooshor* will not break its grip after the **emergency lock** is set.

FOND DU LAC, WISC.

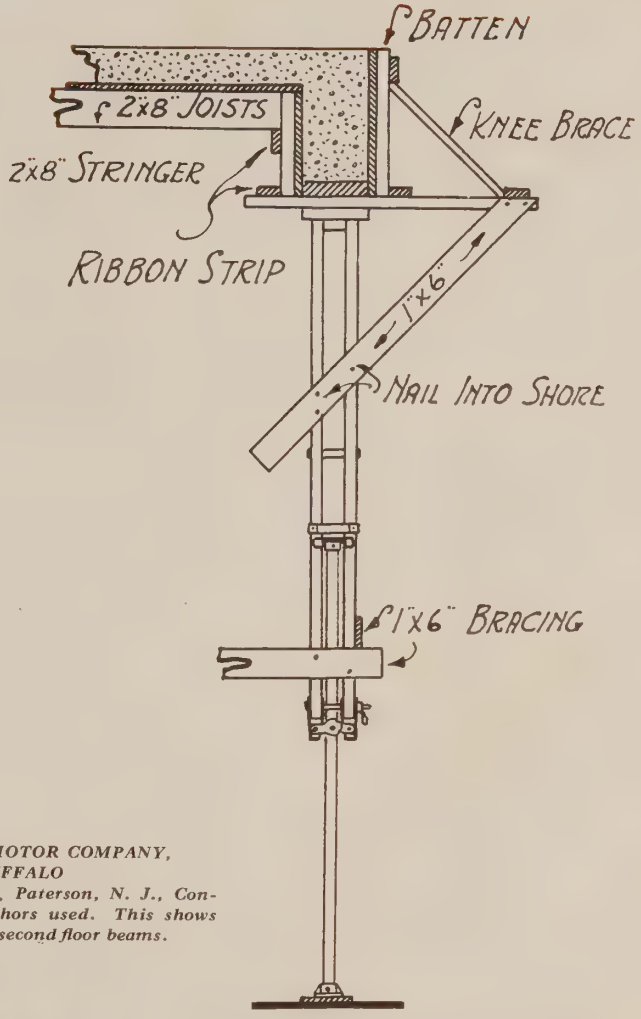
Regarding our 1,850 *Rooshors*, we are convinced that they are much more economical than 4x4 shores. Our foremen have all found them very satisfactory. *Immel Construction Company*

Exterior Beam Shoring

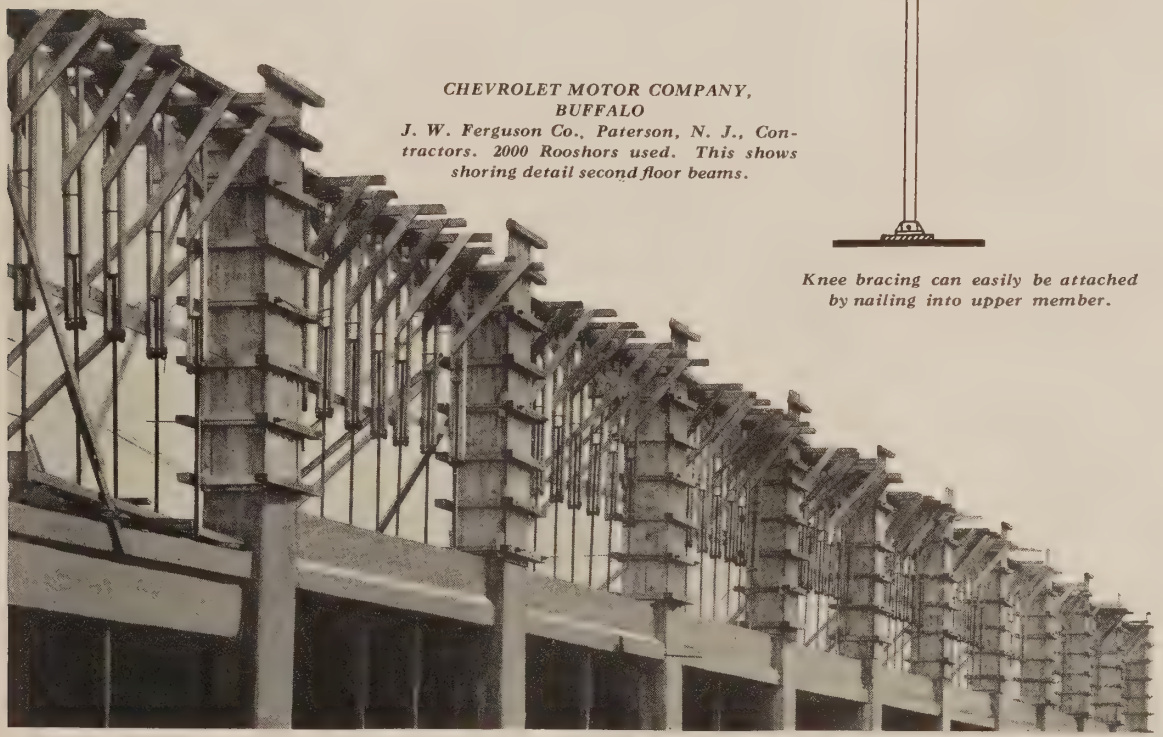
EXTERIOR BEAM shoring with *Rooshors* is easily and quickly taken care of. The 12-inch head on top of the 2x4s makes it easy to nail a 2x4 or 4x4 of any length thereon. Knee bracing can easily be attached by nailing into the upper member. Years of experience tell us that nailing into and pulling out nails in a high grade of timber (long leaf yellow pine B and Better grade) used in *Rooshors*, does little harm; in fact, it does not weaken them.

Head blocks are drilled with small holes for convenience in making attachments.

The universal use to which *Rooshors* can be put at so little expense, is a big factor in making them pay for themselves in a short time.



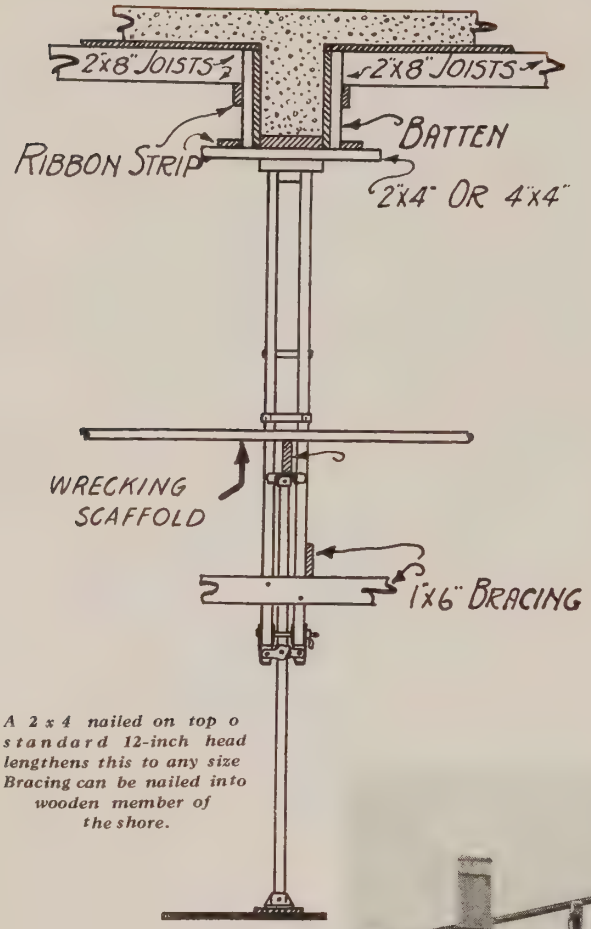
Knee bracing can easily be attached by nailing into upper member.



CHEVROLET MOTOR COMPANY, BUFFALO
J. W. Ferguson Co., Paterson, N. J., Contractors. 2000 Rooshors used. This shows shoring detail second floor beams.

ST. LOUIS, MO.

Are very much pleased with 500 *Rooshors* we have at Omaha and are pleased to hand you order for 1,000 to be shipped to our St. Louis office. *Jas. Black Masonry & Contracting Co.*



A 2 x 4 nailed on top o standard 12-inch head lengthens this to any size Bracing can be nailed into wooden member of the shore.

Interior Beam Shoring

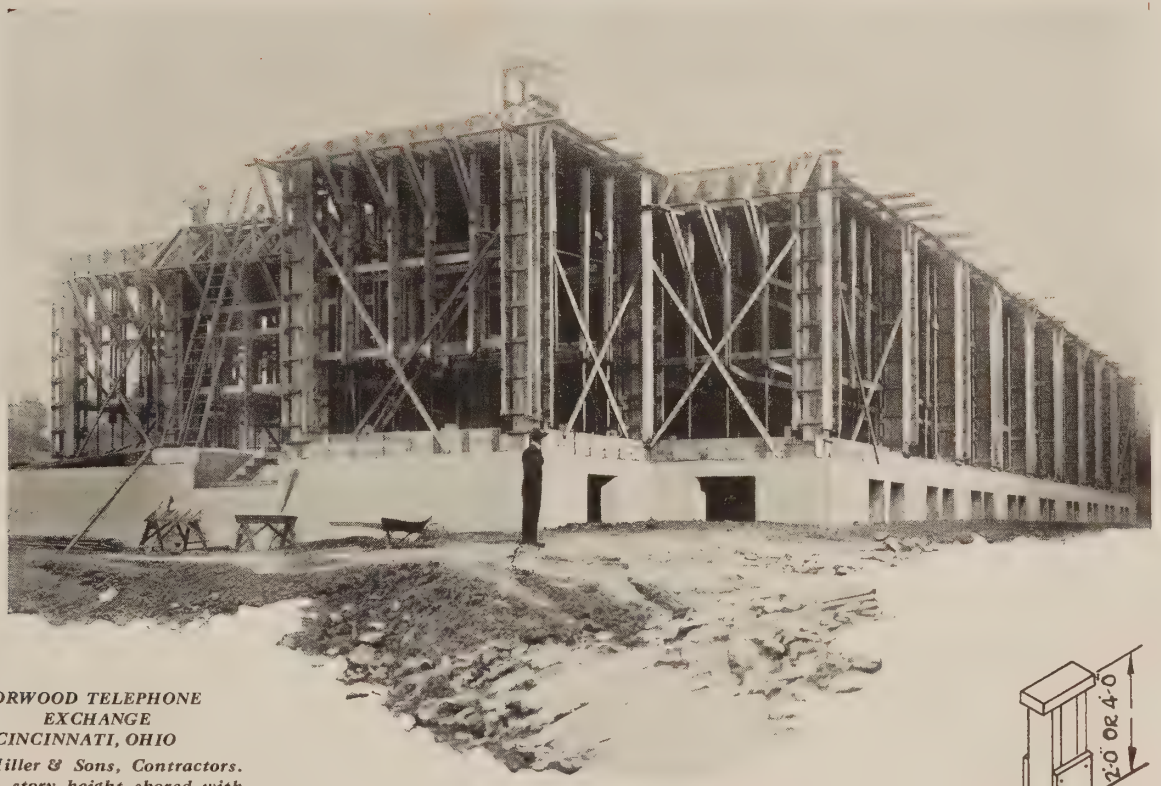
INTERIOR BEAM shoring with 4x4s is far more expensive because of the knee bracing which is necessary. A 4x4 Tee head shore must be knee braced and scabbed to make the head stable. The *Rooshor*, with its twelve-inch head, in a great majority of cases, does not require any knee braces. The twelve-inch head being securely fastened to the 2x4s, presents three times the nailing surface as the 4x4. Here is another place where *Rooshors* will reduce your costs on form erection.

Wrecking scaffolds in many instances are easily and quickly constructed by laying a 4x4 or plank on top of the pipe of the *Rooshor*. At right angles to this, planking can be placed making a platform without the necessity of driving a nail. With 4x4s heavy nailing is necessary and it is far more expensive.

BUFFALO BASE BALL PARK
Benzinger & Son, Contractors. Rooshors easily take care of sloping slabs on stadium balconies and sloping roofs.

DETROIT, MICH.

Superior to any other shoring method. Our two recent orders each for 500 *Rooshors* substantiate the statement that we consider them an essential part of our equipment. *Malow-Barry Co.*



NORWOOD TELEPHONE EXCHANGE CINCINNATI, OHIO

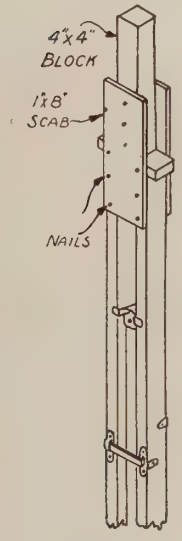
Wm. Miller & Sons, Contractors. 18-foot story height shored with extension heads on Rooshors.

Extension Heads

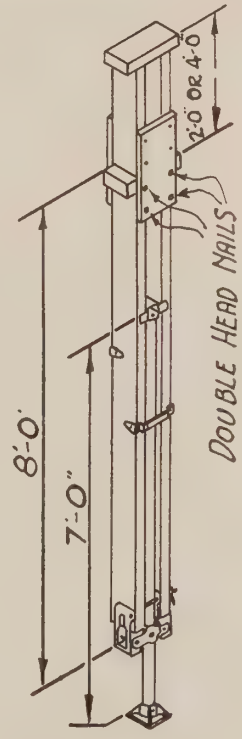
STORY HEIGHTS greater than 14 ft. are shored with our *extension head*. This consists of an attachment as shown with two pieces of 7/8-inch stock board as scabbing. The stock board is a permanent part of the extension head and is attached to the *Rooshor* with the double-head nails or collars to permit the easy removal when not needed. A simpler method of merely scabbing a 4x4 on top of the shores is also shown.

These heads are made in 2 ft. or 4 ft. sections, making the standard 8 ft. *Rooshors* adjustable from 10 feet to 16 feet or 12 feet to 18 feet respectively.

Standard equipment, therefore, with an attachment for extreme cases, can be used. This would be very expensive with 4x4s.



A simple method of increasing the length of Rooshors



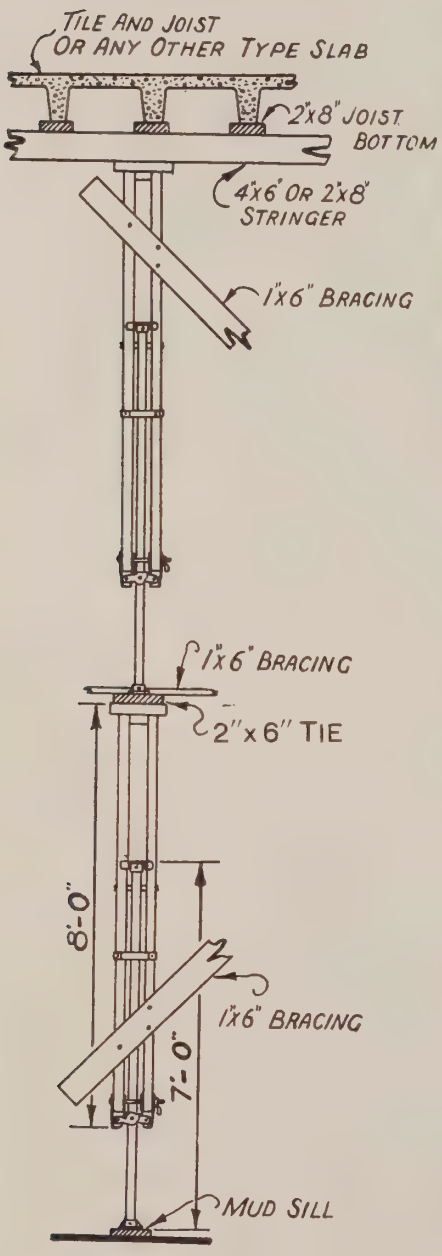
For heights between 14 and 18 feet Rooshors with special extension heads, can be furnished as shown here, or contractor can make.

BOSTON, MASS.

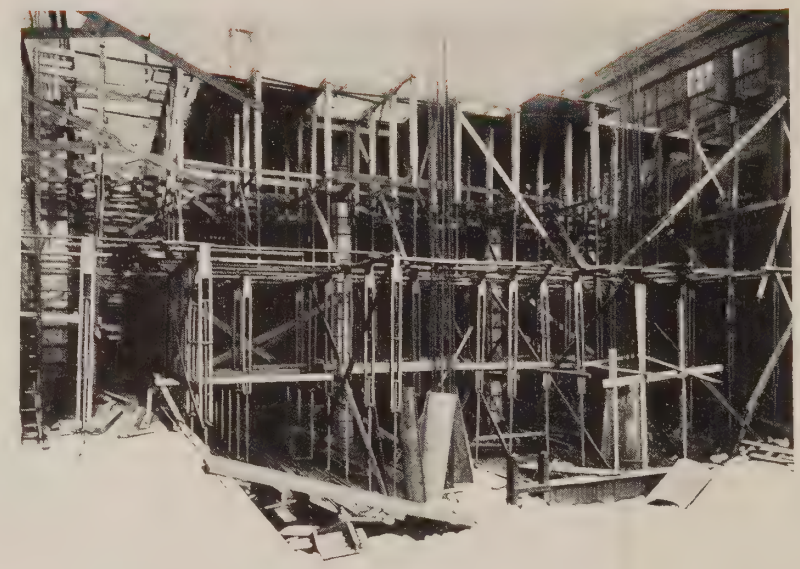
We are very much satisfied with this device.

Stone & Webster, Inc.

AMERICAN CAN CO., INDIANAPOLIS, IND.
Ferro Concrete Const. Co., Contr., Cin'ti, O.
2000 Rooshors used.



For heights over 18 feet Rooshors double decked are cheaper and more easily erected than long 4 x 4 shores.



High Story Shoring

HIGH-STORY SHORING is an expensive operation. With 4x4s it means a large amount of lumber and expensive labor costs, because of the bulkiness of long shores. After the 4x4 shores are made, it requires several men to set each shore, by pulling them into place by means of a rope. It is also a difficult, dangerous and expensive operation to wreck long 4x4 shores.

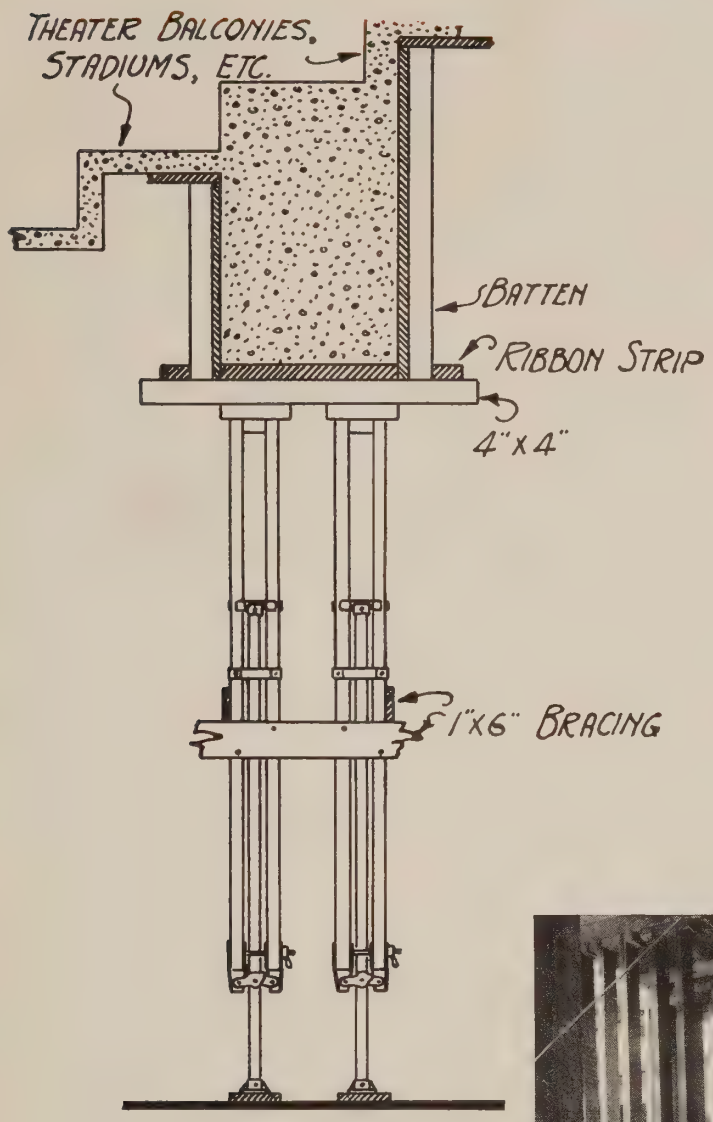
With *Rooshors* high-story shoring is simplified by merely setting one tier of shores above another. No matter how uneven the bottom floor might be, nor how much the high-story slab might slope, the standard *Rooshor* will meet the condition instantly as a ONE-MAN OPERATION.

Rooshors are easy to strip or wreck, because the lower tier acts as a platform for wrecking the upper tier of shores.

For railroad roundhouses, theatre balconies and high stories of any description, *Rooshors* are indispensable and save their cost in labor alone.

NEW ORLEANS, LA.

In our opinion *Rooshors* spell speed and service and we consider them a necessity in a contractor's equipment.
J. V. & R. T. Burkes.



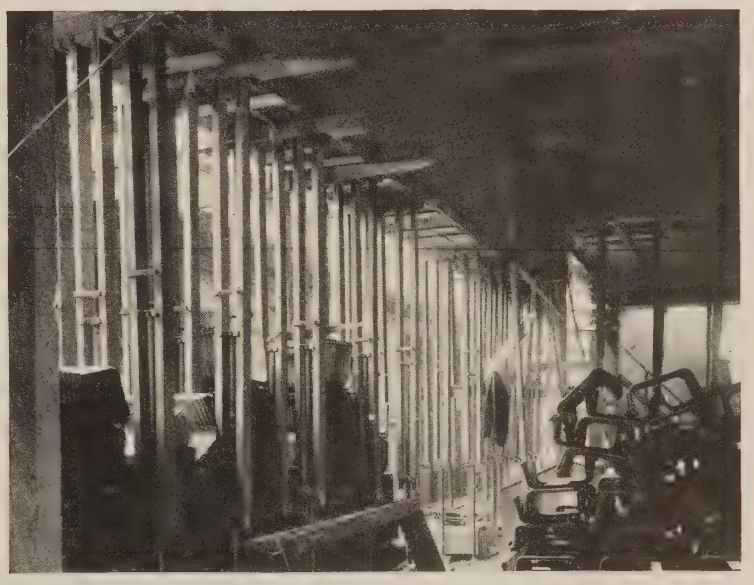
Any size beam or girder can be shored with Rooshors.

Heavy Beam Shoring

ROOSHORS WILL SUPPORT heavy beams on long spans. It simply means placing them in such a way that their safe working capacity of 3,000 lbs. is not exceeded.

Entire theatre balconies have been supported on *Rooshors* where very long spans of heavy girders, 15 ft. in depth, and cantilever beams, with 35 ft. overhang, were necessary. The *Rooshor* did the work most economically and with complete success.

The *Rooshor* adapts itself very nicely for the construction of stadium or sloping slabs of any kind. The use of extension heads and double decking, as shown on pages 13 and 14, enables the standard *Rooshor* to take care of the varying heights by the use of the one size *Rooshor*. There is no better or easier way to do the work.



PALACE THEATRE BLDG.
CINCINNATI, OHIO
M. Marcus Bldg. Co.
Contractors, Cincinnati, Ohio
2,000 Rooshors used.

SAGINAW, MICH.

We can highly recommend the use of *Rooshors*. They have proven very satisfactory. Your shoring layout will help us immeasurably in placing our forms. *O. W. Jenkins Company.*

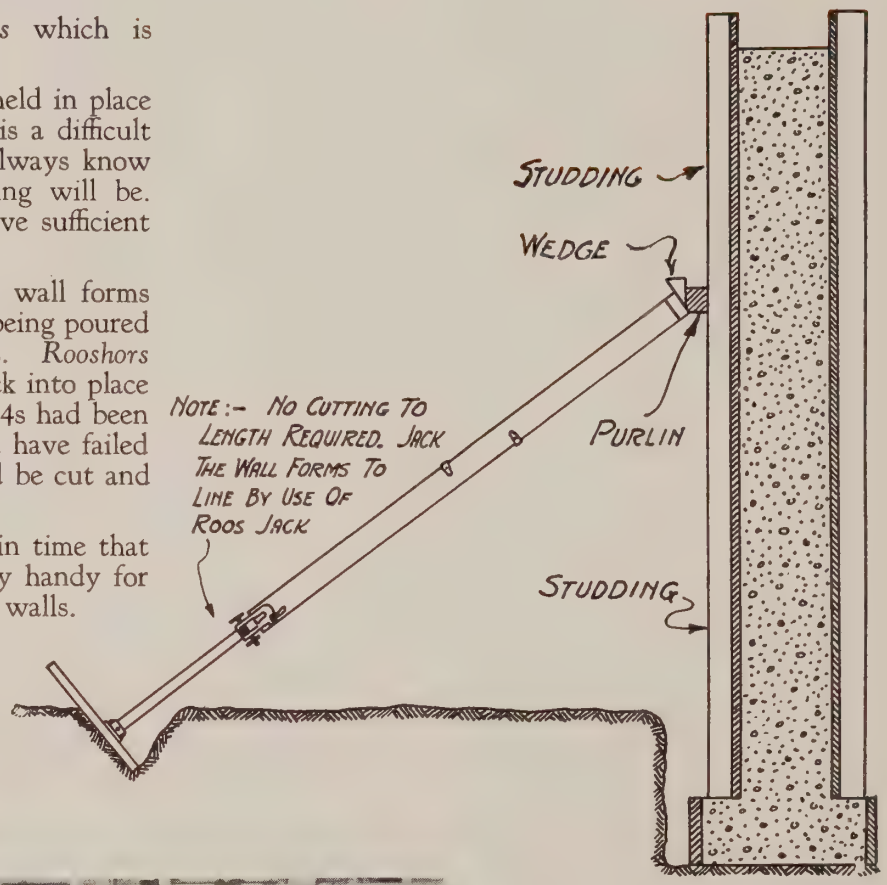
Wall Bracing

HERE'S A USE for *Rooshors* which is characteristic!

Foundation walls are easily held in place with *Rooshors*. With 4x4s it is a difficult problem, because you do not always know how far back your solid footing will be. Wedging generally does not have sufficient take-up to do the trick.

On a large concrete job the wall forms bulged while the concrete was being poured because of failure of the ties. *Rooshors* were used to jack the forms back into place and saved the wall. If only 4x4s had been available, the wall forms would have failed completely before timbers could be cut and fitted as emergency braces.

Rooshors acted as the stitch in time that saves nine. They also are very handy for making platforms for concreting walls.



A knotty problem easily and simply solved by the use of Rooshors and at small cost.

MEDICAL ARTS BUILDING
ASHEVILLE, N. C.
Buchholz Const. Co., Contractors
Asheville, N. C.
500 Rooshors Used

Note the method of jacking a heavy pressure with Rooshors—3,000 lbs. or more can be obtained.

ROCHESTER, N. Y.

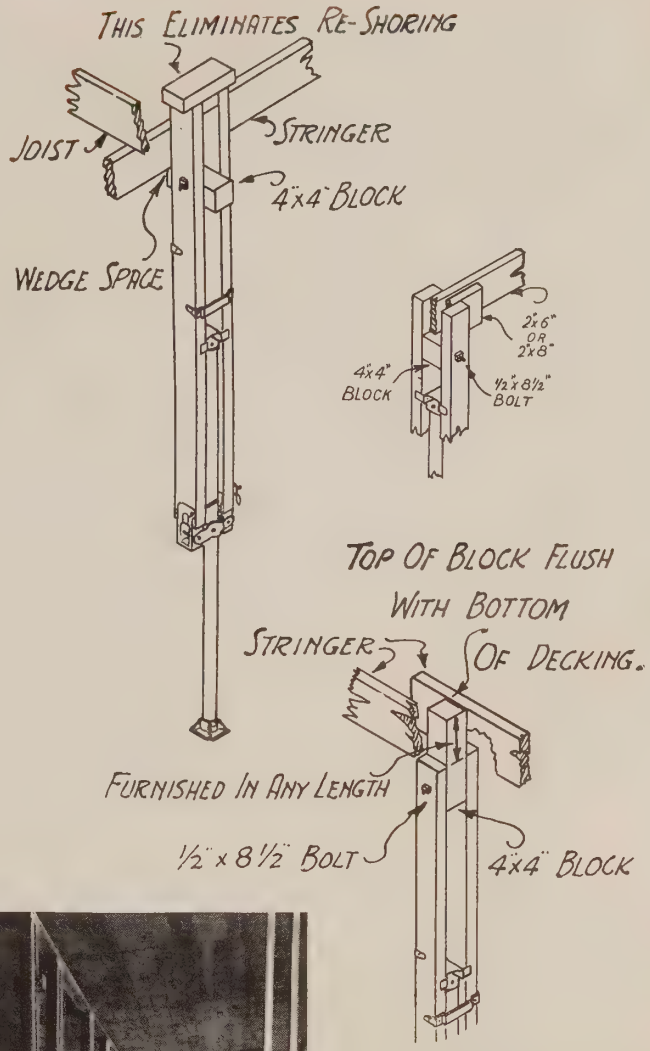
Our workmen will not use a 4x4 for scaffolding or anything else if they can substitute a *Rooshor* in its place.
Ridge Construction Co.

Special Heads

ROOSHORS WITH SPECIAL HEADS can be made up to take care of the special methods used to meet the particular needs of contractors. Here we show three different types of heads which have been used to take care of special details on various types of construction.

Almost any condition can be met and our engineering department will design heads to meet your desires.

Very often a little study of a new method of forming to simplify erection and removal will save hundreds of dollars on many jobs. Our work carries us to all parts of the country and we have helped to solve many intricate problems for the benefit of the building industry. Why not let our experts who are constantly studying various forming methods, help you, too? There's no obligation.



A few types of special constructions.

Note the long line of shores which remain. All forms have been removed. No reshoring is necessary with this method.

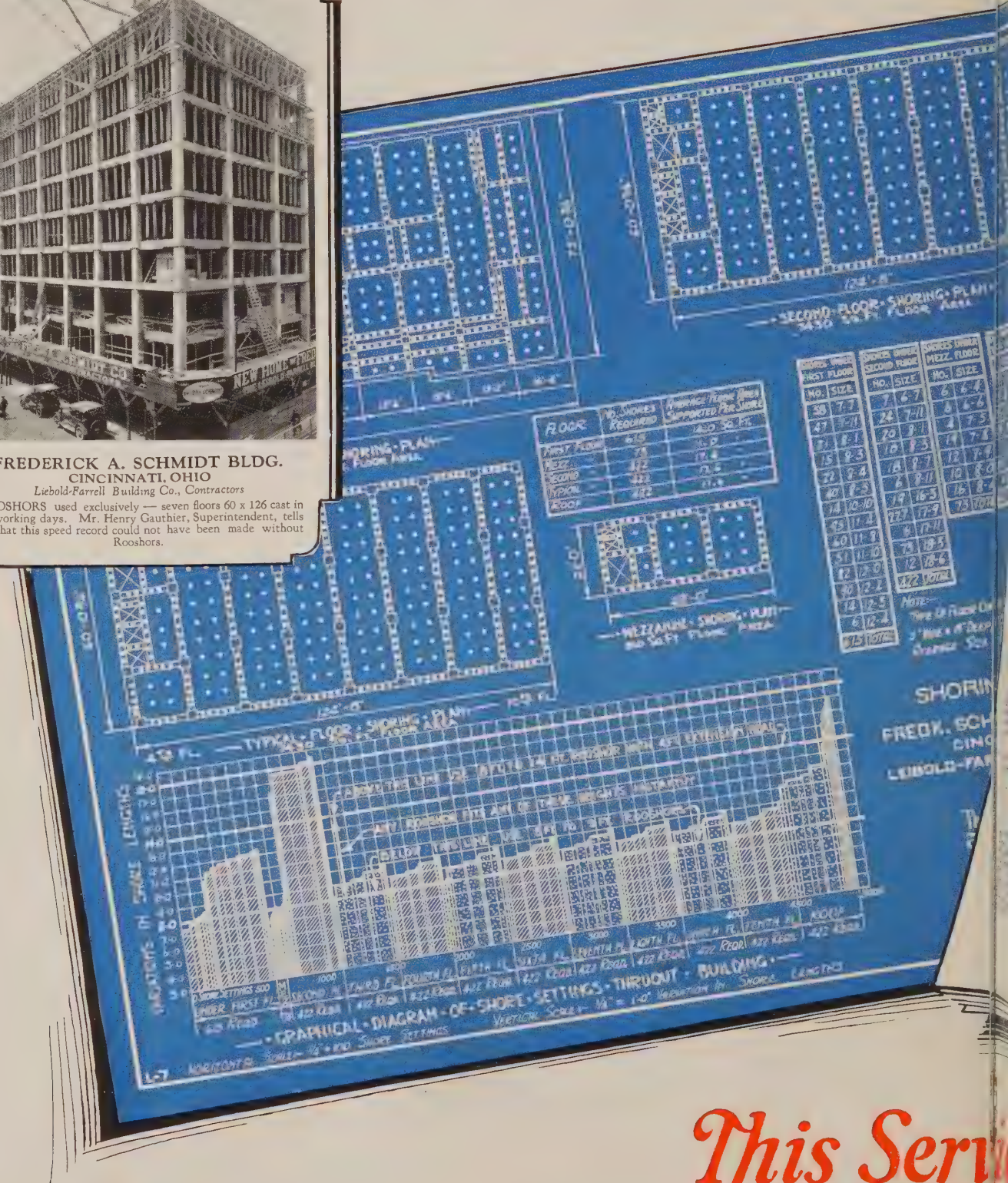
PHILADELPHIA, PA.

Rooshors have given excellent service. (This Company bought 300 *Rooshors* and found them so satisfactory that they purchased 1500 more.)

Nelson-Pedley Construction Co., Inc.

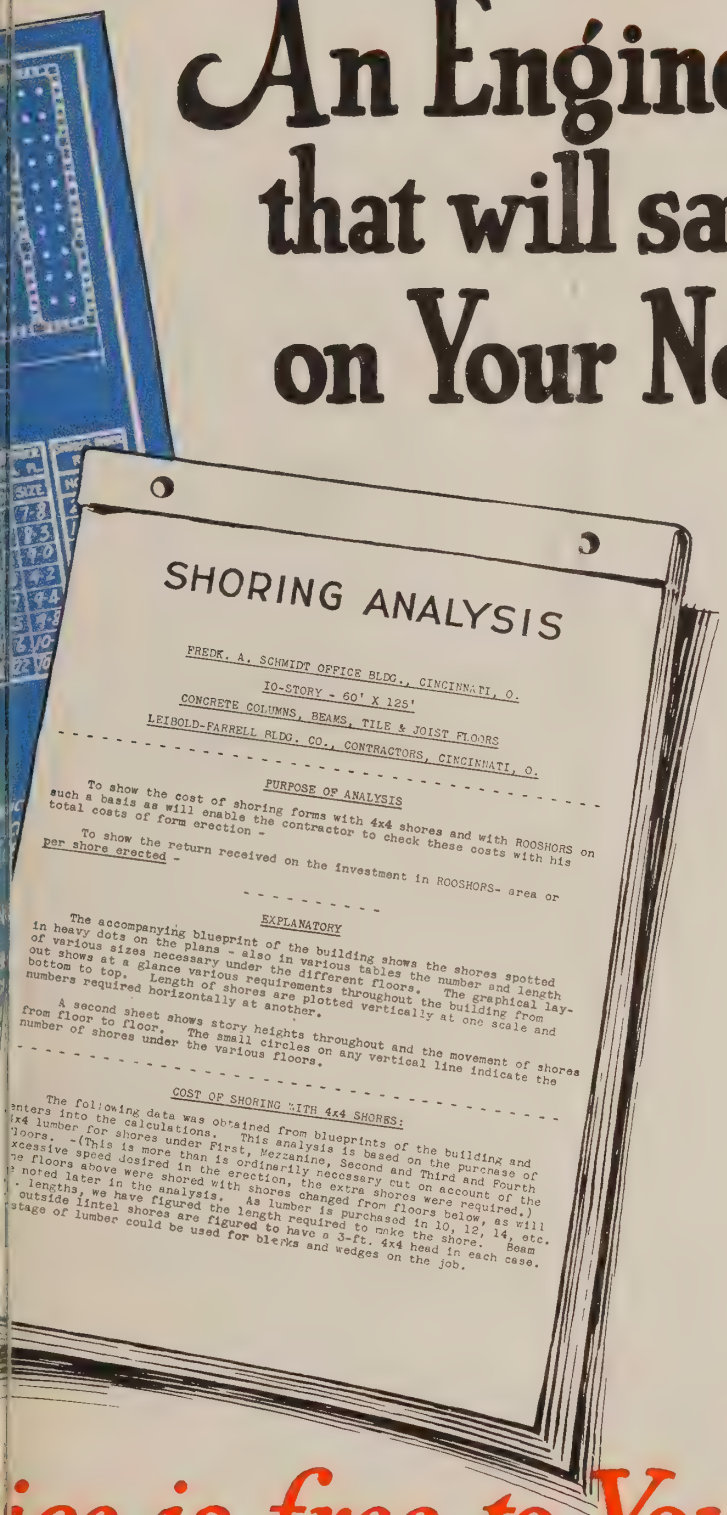
FREDERICK A. SCHMIDT BLDG.
CINCINNATI, OHIO
Liebold-Farrell Building Co., Contractors

ROOSHORS used exclusively — seven floors 60 x 126 cast in 22 working days. Mr. Henry Gauthier, Superintendent, tells us that this speed record could not have been made without Rooshors.


SECOND FLOOR SHORING PLAN
TYPICAL FLOOR SHORING PLAN
MEZZANINE SHORING PLAN
GRAPHICAL DIAGRAM OF SHORE SETTINGS THROUGH BUILDING

This Servi

An Engineering Service that will save you hundreds on Your Next Big Job!



SHORING ANALYSIS

FREDK. A. SCHMIDT OFFICE BLDG., CINCINNATI, O.

10-STORY - 60' X 125'

CONCRETE COLUMNS, BEAMS, TILE & JOIST FLOORS

LEIBOLD-FARRELL BLDG. CO., CONTRACTORS, CINCINNATI, O.

PURPOSE OF ANALYSIS

To show the cost of shoring forms with 4x4 shores and with ROOSHORS on such a basis as will enable the contractor to check these costs with his total costs of form erection -

To show the return received on the investment in ROOSHORS- area or per shore erected -

EXPLANATORY

The accompanying blueprint of the building shows the shores spotted in heavy dots on the plans - also in various tables the number and length of various sizes necessary under the different floors. The graphical layout shows at a glance various requirements throughout the building from bottom to top. Length of shores are plotted vertically at one scale and numbers required horizontally at another.

A second sheet shows story heights throughout and the movement of shores from floor to floor. The small circles on any vertical line indicate the number of shores under the various floors.

COST OF SHORING WITH 4x4 SHORES:

The following data was obtained from blueprints of the building and enters into the calculations. This analysis is based on the purchase of 4x4 lumber for shores under First, Mezzanine, Second and Third and Fourth floors. -(This is more than is ordinarily necessary cut on account of the excessive speed desired in the erection, the extra shores were required.) The floors above were shored with shores changed from floors below, as will be noted later in the analysis. As lumber is purchased in 10, 12, 14, etc. lengths, we have figured the length required to make the shore. Beam outside lintel shores are figured to have a 3-ft. 4x4 head in each case. Stage of lumber could be used for blocks and wedges on the job.

ice is free to You!

THE BEST PROOF of the relative merit of the two systems of shoring is an analysis of the cost of doing the work with 4x4s and with *Rooshors*. This shows the exact amount of money that can be saved and the income that you will receive on your investment in *Rooshors*.

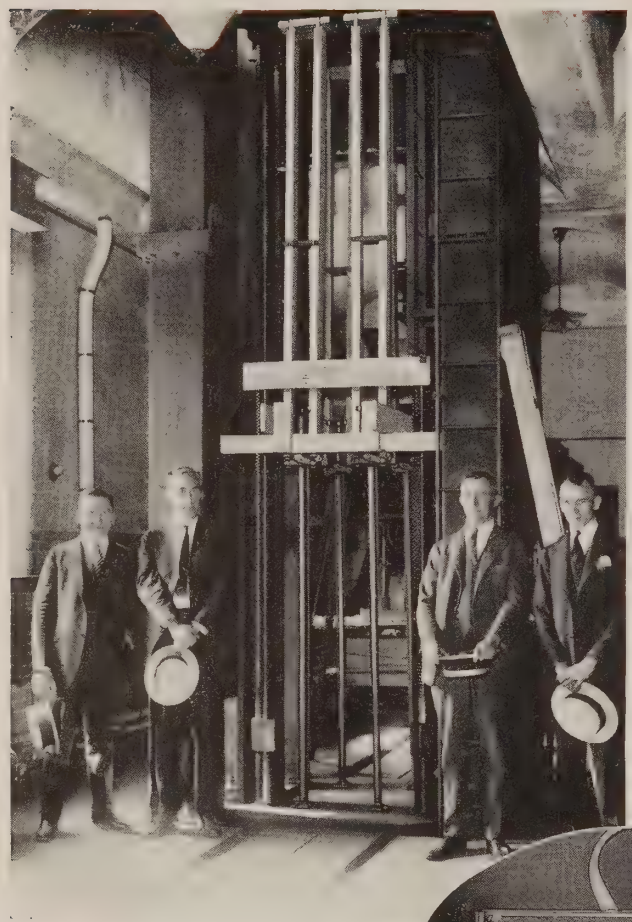
Our Engineering Department is ready to serve the trade, without obligation, and will furnish a blueprint spotting shores on your job similar to the one shown. (Excessive speed of erecting 7 floors in 22 working days explains the many floors shored on this contract.)

Send us a few of your structural floor plans and elevation or section through your building, together with beam and slab schedule, and we will show you how much money you can save on your contract.

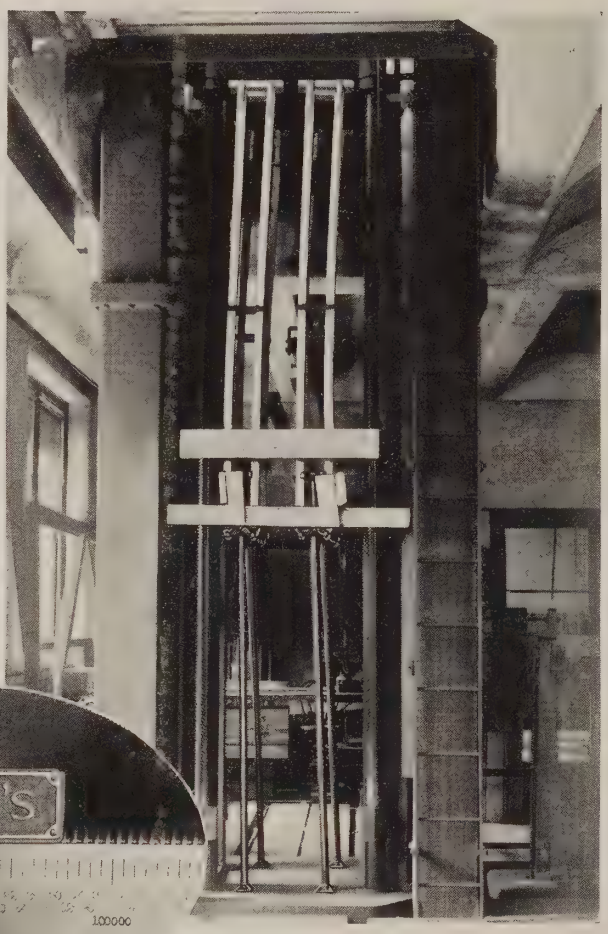
There's no obligation and the service is free to you.

The Philadelphia Test

47,400 Pounds Pressure



Showing Rooshors in testing machine before loading.



Rooshors with 47,400-lb. load.

THE ABOVE TEST was made in the presence of Mr. Chas. A. Flanagan, of Bureau of Building Inspection, Prof. H. C. Berry, of University of Pennsylvania, on August 14, 1924.

The maximum load of 47,400 (11,850 lbs. per *Rooshor*) is positive proof of the perfect design, high quality of materials and superior workmanship of which *Rooshors* are made. No weak points were developed and the load might easily have been increased. On removal, the *Rooshors* recovered their alignment and were in perfect condition.

This test shows what the *Rooshor* will hold. On the basis of our recommended working load of 3,000 lbs. per shore we have a factor of safety of four. This is ample for temporary supports.

LOS ANGELES, CALIF.

We are very well satisfied with *Rooshors* and hope to increase our present 400 to a thousand.

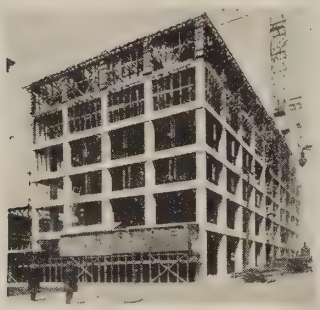
Wurster Construction Co.

Wark Company's Rooshor Experience

Cadillac Bldg., Phila.
8 Stories 17,300 sq. ft. each
2200 Rooshors used

Budd Mfg. Company, Detroit
150 x 100 x 4 Stories
950 Rooshors used on beams and lintels only

Seaman's Church Inst.
Philadelphia
1100 Rooshors used



Boyak Cigar Fac., Phila.
8 Stories 15,000 sq. ft. each
2000 Rooshors used

WARK COMPANY
BUILDING CONSTRUCTION
1600 WALNUT STREET

PHILADELPHIA, PA.

July 7, 1926.

The H. W. Roos Co.,
Cincinnati, Ohio.

In re: Our experience with "ROOSHORS".

Gentlemen:-

Accept our delayed note of thanks to you, and your Mr. Walker in particular, for having convinced us several years ago of the economy and wisdom of using "ROOSHORS" to expedite the erection of our building.

We are at present using thousands of "ROOSHORS" throughout the country and they are giving complete satisfaction.

It has been our experience that the workmen like to use these shores and our foremen invariably insist on having a full supply of them on hand, so as to better comply with our rapid progress schedules and close costs, in which they share when there is a saving.

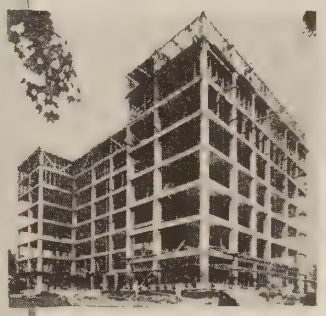
Finally, we consider the "ROOSHORS" when properly cared for, to be one of our most valuable pieces of equipment.

Sincerely,

W. R. Cooper

W. R. Cooper,
Secretary.

WRC:K



McCallum Apts., Phila.
150 x 92 x 9 Stories
1800 Rooshors used

Gulf Office Bldg., Phila.
50 x 100 x 10 Stories
500 Rooshors used

The Wark Co. purchased *ROOSHORS* as follows:

Sept., 1924	500	June, 1925	1000
Oct., 1924	600	July, 1925	400
May, 1925	500	July, 1925	600
		Dec., 1925	950

TOTAL 4,550 ROOSHORS

Bell Telephone Bldg., Phila.
140 x 160 x 18 Stories
2400 Rooshors used

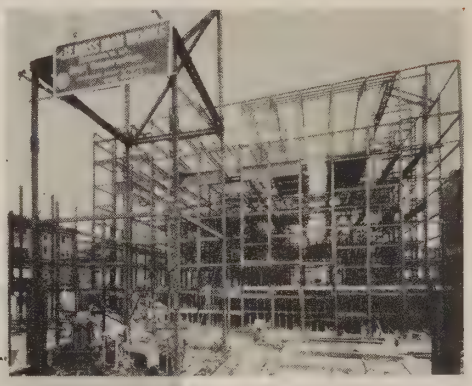
NASHVILLE, TENN.

We are highly pleased with them. They are a great labor saver.

Foster & Creighton Co.

Ferro Purchased 6000 Rooshors

Cincinnati Terminal Warehouse Bldg.
4,000 ROOSHORS Used



Cincinnati Masonic Temple
4,000 ROOSHORS Used

American Can Co. Building
Cincinnati, Ohio
1,000 ROOSHORS Used

Crosley Radio Co. Building
Cincinnati, Ohio
2,500 ROOSHORS Used

American Laundry Machinery Co.
Bldg., Norwood, Ohio
3,000 ROOSHORS Used

Vernon Manor Apartment Hotel
Cincinnati, Ohio
3,000 ROOSHORS Used

Good Samaritan Hospital Bldg.
Cincinnati, Ohio
2,000 ROOSHORS Used

W. P. ANDERSON, CHAIRMAN OF BOARD
TYLOR FIELD, Pres't. ESTE H. LEA V. Pres't H. D. LORING, Sec'y & Treas.
ALL AGREEMENTS ARE SUBJECT TO THE APPROVAL OF ONE OF THE OFFICERS OF THE COMPANY

The FERRO CONCRETE CONSTRUCTION COMPANY
"Concrete for Permanence"
CINCINNATI, OHIO

Aug. 10, 1926.

H. W. Roos Co.,
2036 Dana Ave.,
Cincinnati, Ohio.

Gentlemen:

The Constructor is confronted with the problem of using labor saving devices. This is more pronounced today than in the immediate past because of the continued increase in labor and mechanics rate to pay.

We have found the Roos shore to be a reliable time and money saver in the erection of forms. This is evidenced by the fact that to-day we have purchased 6000 of your shores.

We are particularly pleased with the life of the Roos shore. At the present time we have shores six years old that are serving their purpose as well as the shores just recently purchased.

We do not hesitate in recommending your shore to be a strong, reliable and money saving device.

Very truly yours,

THE FERRO CONCRETE CONSTRUCTION COMPANY

ECH/MB GENERAL SUPERINTENDENT.

Ferro Concrete Construction Co. purchased *Rooshors* as follows:

July, 1922	1000	Dec., 1925	1000
Aug., 1922	500	Mch., 1926	500
Dec., 1922	500	June, 1926	2500

Total 6000 *Rooshors*

MILWAUKEE, WIS.

The *Rooshor* is one of the best modern equipment improvements we have come in contact with.
The Raulf Company

Consolidated Engineering Company's Experience

Eastwick Garage
29th and Remmington Ave.
Baltimore, Maryland
1,800 ROOSHORS Used

Johns Hopkins University
Chem. Laboratory
Homewood, Baltimore, Md.
3,500 ROOSHORS Used

State Normal School
Towson, Maryland
1,400 ROOSHORS Used

CONSOLIDATED ENGINEERING COMPANY, INC.

ENGINEERS AND CONTRACTORS

ST PAUL AND FRANKLIN STREETS

BALTIMORE, MD.

June 30, 1926

H.W. Roos Co.,
631 Calvert Bldg.,
Baltimore, Md.

Gentlemen:

Regarding the 3500 ROOSHORS which we purchased from you in July and October of 1923, please be advised that these ROOSHORS have been used on fifteen or twenty jobs and are still in excellent condition. We have found them a big money saver and do not think that we would ever want to be without them again.

You may rest assured that as soon as we need a new supply we will communicate with you regarding same.

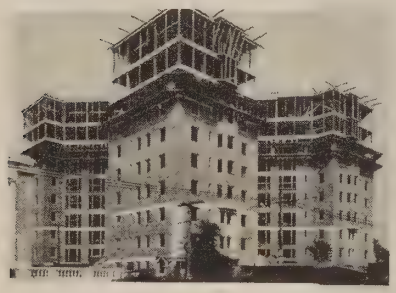
Very truly yours,

CONSOLIDATED ENGINEERING CO.

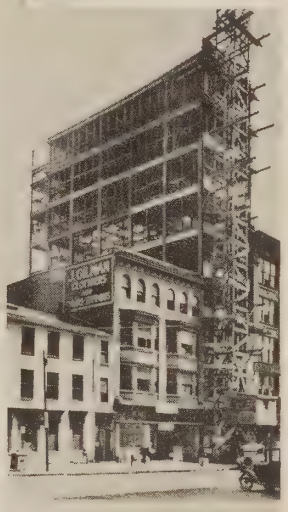
J.A. Stalfort

JAS:EJM Genl. Mngr. Bldg. Dept.

War Memorial Building
Baltimore, Maryland
1000 ROOSHORS Used



University Apartments
2,000 ROOSHORS Used



Emerson Drug Company
Eutaw near Lombard Street
Baltimore, Maryland
600 ROOSHORS Used

Southern Supply Building
Calvert near Saratoga St.
Baltimore, Md.
1,000 ROOSHORS Used

Consolidated Engineering Co. purchased *Rooshors* as follows:

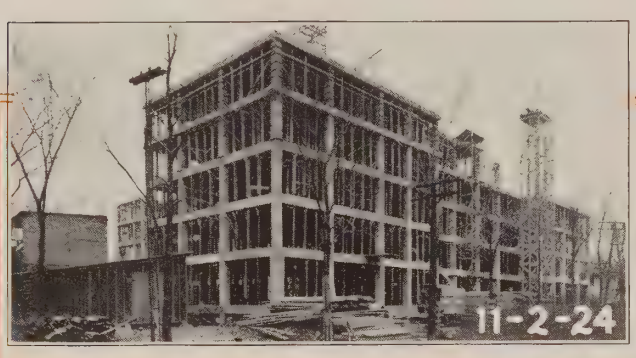
Sept., 1923.. 500
Oct., 1923..3000
Total 3500 *Rooshors*

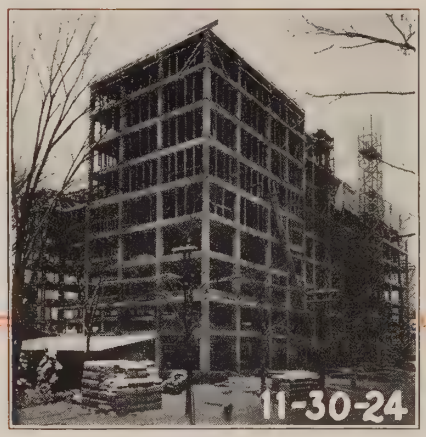
WASHINGTON, D. C.

Rooshors are very satisfactory from a standpoint of quick, economical erection, neat appearing job and durability.
Weller Construction Co.

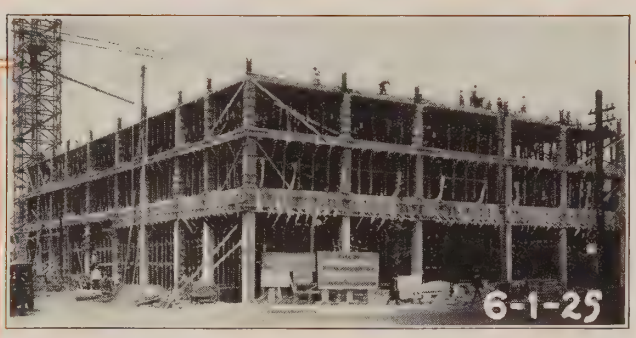
Speed on Jobs!

These specific jobs show how ROOSHORS speed up construction work and thereby eliminate overhead expense—**SPEED AT LOW COST.**





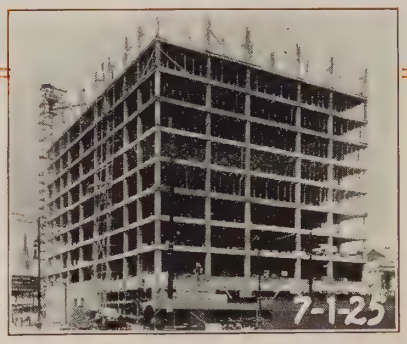
Four Floors in 28 Days—Note Snow
33 Gates Circle Apartment Hotel, Buffalo, N. Y.
H. L. Stevens Co., Contrs., Chicago and New York City
3000 ROOSHORS used

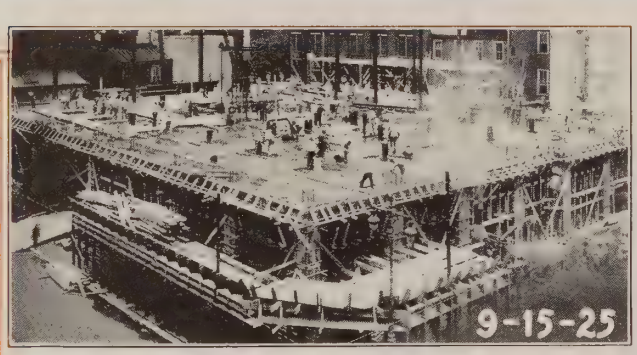


Six Floors in
30 Days

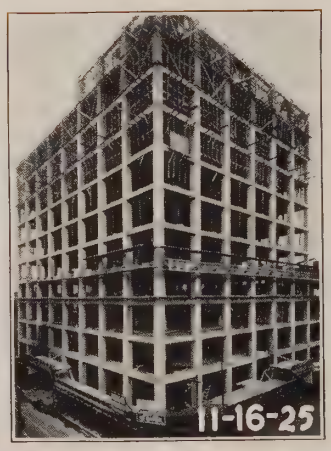
Jung Hotel
New Orleans, La.
J. V. & R. T. Burkes
Contractors
New Orleans, La.

2400 ROOSHORS used





12 Floors in 90 Days—Cold Weather
Bell Telephone Bldg., Philadelphia, Pa.
Wark Co., Contractors, Philadelphia, Pa.
2400 ROOSHORS used



PITTSBURGH, PA.

The 7,500 *Rooshors*, which we are using, eliminate large amounts of labor, common in the use of 4x4 shores. We are thoroughly satisfied with the product. *Hughes-Foulkrod Co.*

Representative Jobs

A. & P. Tea Co. Warehouse, Kansas City, Mo.
S. Patti Const. Co., Contrs., Kansas City, Mo.
1000 ROOSHORS Used
Hotel Metropole, Cincinnati, Ohio
H. L. Stevens Co., Contrs., Chicago, Ill.
1200 ROOSHORS Used
Forest Park High School, Baltimore, Md.
J. Henry Miller Contractor, Baltimore, Md.
1000 ROOSHORS Used
Westinghouse Lamp Co., Indianapolis, Ind.
Dwight P. Robinson Co., Contrs., New York City
3000 ROOSHORS Used
Downtown Garage, Buffalo, N. Y.
John W. Cowper Co., Inc., Contrs., Buffalo, N. Y.
1500 ROOSHORS Used
Foundry for Standard Sanitary Mfg. Co.,
Louisville, Ky.
L. W. Hancock, Contractor, Louisville, Ky.
3600 ROOSHORS Used
Mayer Building, Portland, Oregon
Lorenz Bros., Contractors, Portland, Oregon
600 ROOSHORS Used
Hagner Tire Co. Bldg., San Antonio, Texas
James Aiken, Contractor, San Antonio, Texas
600 ROOSHORS Used
Hudson Dept. Store, Detroit, Mich.
Bryant & Detwiler, Contractors
2000 ROOSHORS Used
Third National Bank Bldg., Dayton, O.
Shook & Billiter, Contractors
1600 ROOSHORS Used
Kahl Bldg., Davenport, Iowa
Walsh Const. Co., Davenport, Iowa
Contractors
3000 ROOSHORS Used
Keith Palace Theatre, Cleveland, O.
Lundoff-Bicknell Co., Cleveland, Ohio
Contractors
1300 ROOSHORS Used

GREENVILLE, S. C.

The *Rooshors* are a great time saver in shoring concrete work. They will do all that is claimed for them.
Fiske-Carter Const. Company.

Representative Jobs

Jesuit High School, New Orleans, La.
Geo. J. Glover Co., Inc., Contractors
2300 ROOSHORS Used

Cincinnati Business Men's Club
Cincinnati, Ohio
J. & F. Harig Co., Contractors
1650 ROOSHORS Used

U. C. Stadium, Cincinnati, Ohio
M. J. Roche Construction Co., Contractors
1200 ROOSHORS Used

Cincinnati Rapid Transit Subway, Cincinnati, O.
D. P. Foley Contractor
2000 ROOSHORS Used

Schmidt Bottling Works, Philadelphia, Pa.
White Const. Co., Contrs., New York City
1000 ROOSHORS Used

Boyle Robertson Apartments, Washington, D. C.
Federal Fireproofing Co., Contractors
2000 ROOSHORS Used

Maccabee Temple, Detroit, Mich.
H. G. Christman Co., Contractors
2000 ROOSHORS Used

Webster Hall Hotel, Pittsburgh, Pa.
Concrete Form Co., Contractors., Pittsburgh, Pa.
1600 ROOSHORS Used

Mercantile Building, Oklahoma City, Okla.
Kreipke Const. Co., Contractors
1000 ROOSHORS Used

Juvenile Detention Home, Chicago, Ill.
J. W. Snyder Co., Contractors
1000 ROOSHORS Used

School for Crippled Children, Boston, Mass.
Stone & Webster, Inc., Contractors
1200 ROOSHORS Used

The Jewish Hospital of St. Louis, Mo.
Murch Bros. Const. Co., Contr. St. Louis, Mo.
3000 ROOSHORS Used

BALTIMORE, MD.

Regarding our 3,500 *Rooshors*, they are very economical in erection and save a tremendous amount of shoring lumber. We have used them on six different jobs.

Consolidated Engineering Co., Inc.

Representative Jobs

Builders Supply Co. Bldg., San Antonio, Texas
B. R. Heath, Contractor, San Antonio, Texas
600 ROOSHORS Used

Barlum Hotel, Detroit, Mich.
Otto Misch Co., Contrs., Detroit, Mich.
2000 ROOSHORS Used

Shubert Theatre, Milwaukee, Wisconsin
Gus E. Kahn, Contractor, Milwaukee, Wis.
2000 ROOSHORS Used

Bethesda Hospital, Cincinnati, Ohio
Max Penker & Sons Co., Contrs., Cincinnati, O.
2000 ROOSHORS Used

Lasky Studio Bldg., Hollywood, Calif.
H. M. Baruch, Contr., Los Angeles, Calif.
1200 ROOSHORS Used

Charles Apartments, Baltimore, Md.
Weller Const. Co., Contrs., Washington, D. C.
1000 ROOSHORS Used

Hearst Newspaper Plant, Baltimore, Md.
Frainie Bros. & Haigley, Contrs.
Baltimore, Md.
1400 ROOSHORS Used

Miller Storage Warehouse Philadelphia, Pa.
John N. Gill Const Co., Contrs., Phila., Pa.
1000 ROOSHORS Used

Kaufman & Baer Co. Warehouse.
Pittsburgh, Pa.
Hughes-Foulkrod Co., Contractors
5000 ROOSHORS Used

Canton Co. Warehouse, Baltimore, Md.
Price Const. Co., Contrs., Baltimore, Md.
1000 ROOSHORS Used

Whitehall Hotel, Palm Beach, Fla.
Longacre Engr. & Const. Co., Contrs.
2000 ROOSHORS Used

CLEVELAND, O.

Our 1,300 *Rooshors* have been in constant use for three years and have saved their costs many times and are still in excellent condition

Lundoff-Bicknell Co.

A Partial List of Rooshor Users

*Algernon Blair	Montgomery, Ala.
Wurster Const. Co	Los Angeles, Calif.
*Barrett & Hilp	San Francisco, Calif.
*McDonald & Kahn	San Francisco, Calif.
*F. J. Kirchof Const. Co	Denver, Colo.
*Alex Simpson, Jr	Denver, Colo.
*S. D. Moses	Washington, D. C.
*Fred. Drew Co	Washington, D. C.
*Knollman Spidel Fireproofing Co	Washington, D. C.
*Parsons & Hyman, Inc	Washington, D. C.
*Cafritz Const. Co	Washington, D. C.
*H. P. Giddings	Washington, D. C.
*Boyle-Robertson Const. Co	Washington, D. C.
*Fletcher Fireproofing Co	Washington, D. C.
Federal Fireproofing Co	Washington, D. C.
*Weller Const. Co	Washington, D. C.
*Wardman Const. Co	Washington, D. C.
*Coral Gables Const. Co	Coral Gables, Fla.
Austin Co	Miami, Fla.
Sandquist & Snow	Miami, Fla.
*Geo. N. Smalridge Co	Miami, Fla.
Thompson-Starrett Co	Miami, Fla.
Geo. A. Fuller Co	St. Petersburg, Fla.
Hegeman-Harris Co	Tampa, Fla.
C. A. D. Bayley Co	West Palm Beach, Fla.
*Chalker Lund & Crittenden	West Palm Beach, Fla.
Geo. W. Langford Co	West Palm Beach, Fla.
*The Foundation Co	Atlanta, Ga.
Flagler Co	Atlanta, Ga.
*Artley Co	Savannah, Ga.
*D. M. Reid	Chicago, Ill.
*Ralph Sollitt & Sons	Chicago, Ill.
J. W. Snyder Co	Chicago, Ill.
*H. Janisch & Co	Chicago, Ill.
Callner Const. Co	Chicago, Ill.
*John A. Schumacher Co	Indianapolis, Ind.
*Rath Const. Co	Indianapolis, Ind.
Hall Const. Co	Indianapolis, Ind.
A. E. Kemmer	Lafayette, Ind.
Hay-Weaver Co	South Bend, Ind.
Ralph Sollitt & Sons	South Bend, Ind.
A. H. Neumann Co	Des Moines, Iowa
Currie Simpson Co	Waterloo, Iowa
*Theo. Stark & Co	Cedar Rapids, Iowa
*Peterson Const. Co	Salina, Kas.
*Struck Const. Co	Louisville, Ky.
*L. W. Hancock	Louisville, Ky.
*C. A. Koerner Co	Louisville, Ky.
*National Concrete Const. Co	Louisville, Ky.
General Const. Co	Louisville, Ky.
*Platoff & Bush	Louisville, Ky.
F. T. Justice Co	Lexington, Ky.
J. V. & R. T. Burkes	New Orleans, La.
*Geo. J. Glover Co	New Orleans, La.
R. P. Farnsworth & Co	New Orleans, La
*Underwood Contg. Co	New Orleans, La.
*W. Horace Williams	New Orleans, La.
*Consolidated Eng. Co	Baltimore, Md.
*J. Henry Miller, Inc	Baltimore, Md.
*Frainie Bros. & Haigley	Baltimore, Md.
*M. A. Long Co	Baltimore, Md.
*The Price Const. Co	Baltimore, Md.
The Carozza-Rowe Const. Co	Baltimore, Md.
Cogswell-Koether Co	Baltimore, Md.
J. P. Brandau & Bros	Baltimore, Md.
*Chase & Gilbert	Boston, Mass.
Geo. A. Fuller Co	Boston, Mass.
Stone & Webster, Inc	Boston, Mass.
*I. F. Woodbury & Sons Co	Boston, Mass.
The Scully Company	Boston, Mass.
*Fred T. Ley Co	Springfield, Mass.
*The Otto Misch Co	Detroit, Mich.
*Bryant & Detwiler	Detroit, Mich.
*H. G. Christman Co	Detroit, Mich.
*F. H. Goddard, Inc	Detroit, Mich.
*Everett Winters Co	Detroit, Mich.
*Malow-Barry Co	Detroit, Mich.
*Walbridge-Aldinger Co	Detroit, Mich.
Walter H. Mueller Co	Detroit, Mich.
Davis-McGonigle Co	Detroit, Mich.
*Martin & Krausman	Detroit, Mich.
A. W. Kutsche Co	Detroit, Mich.
*Corrick Bros	Detroit, Mich.
R. S. Knapp Co	Detroit, Mich.
*W. E. Wood Co	Detroit, Mich.
Lennane Co	Detroit, Mich.
*Realty Const. Co	Flint, Mich.
*Owen-Ames-Kimball Co	Grand Rapids, Mich.
*John McNabb & Sons	Grand Rapids, Mich.
*O. W. Jenkins Co	Saginaw, Mich.
*Henry L. Vander Horst	Kalamazoo, Mich.
Paul Steenberg Co	St. Paul, Minn.
Nasvik-Sault Const. Co	St. Paul, Minn.
Crosby-Elmer Const. Co	Kansas City, Mo.
Woermann Const. Co	St. Louis, Mo.
*McCormack-Combs Co	St. Louis, Mo.
*Jas. Black Masonry & Ctg. Co	St. Louis, Mo.
*Murch Bros. Const. Co	St. Louis, Mo.
John E. Wakefield Co	Omaha, Neb.
*John S. & L. Carlson	Montclair, N. J.
*H. L. Stevens Co	Camden, N. J.
M. B. Markland Co	Atlantic City, N. J.
*T. M. Day & Sons	Trenton, N. J.
Henry R. Fell Co	Trenton, N. J.
James Mitchell, Inc	Jersey City, N. J.
*J. W. Ferguson Co	Paterson, N. J.
*Morris & Allen, Inc	Buffalo, N. Y.
*John W. Cowper Co	Buffalo, N. Y.

* Indicates that two or more orders for *Rooshors* have been placed.

DETROIT, MICH.

Rooshors are distinctly worth while on any job, even with the most liberal allowance for depreciation.

Otto Misch Co.

Another List of Rooshor Users

Monarch Engineering Co	Buffalo, N. Y.
*The Schaaf Co	Buffalo, N. Y.
Turner Const. Co	Buffalo, N. Y.
*Peckham Const. Co	Buffalo, N. Y.
*Benzinger & Son	Buffalo, N. Y.
*H. L. Stevens Co	Buffalo, N. Y.
Lowman Const. Co	Elmira, N. Y.
*Laur & Mack Contracting Co	Niagara Falls, N. Y.
*Wright & Kremers, Inc	Niagara Falls, N. Y.
*Havens Construction Co	Olean, N. Y.
*Alexander, Shumway & Utz Co	Rochester, N. Y.
*Ridge Construction Co	Rochester, N. Y.
A. Friederich & Sons Co	Rochester, N. Y.
*Dawson Bros	Syracuse, N. Y.
*J. D. Taylor Construction Corp	Syracuse, N. Y.
W. J. Burns Co	Syracuse, N. Y.
*Warren Construction Co	Jamestown, N. Y.
A. & J. Nelson	New York, N. Y.
*Northeastern Construction Co	New York, N. Y.
*Turner Construction Co	New York, N. Y.
*H. L. Stevens Co	New York, N. Y.
*Dwight P. Robinson Co	New York, N. Y.
*Thompson & Binger, Inc	New York, N. Y.
*United Fireproofing Co	New York, N. Y.
*White Construction Co	New York, N. Y.
Buchholz Construction Co	Asheville, N. C.
*J. A. Jones Construction Co	Charlotte, N. C.
Southeastern Construction Co	Charlotte, N. C.
L. S. Bradshaw	Salisbury, N. C.
Frank L. Blum & Co	Winston-Salem, N. C.
Palmer Spivey Construction Co	Charlotte, N. C.
*The Melbourne Construction Co	Canton, Ohio
*Ferro-Concrete Construction Co	Cincinnati, O.
*The Max Penker & Sons Co	Cincinnati, O.
*Leibold-Farrell Bldg. Co	Cincinnati, O.
*Wm. Miller & Son	Cincinnati, O.
*Fisher-DeVore Construction Co	Cincinnati, O.
*F. W. Folz & Co	Cincinnati, O.
*Wm. Harig & Co	Cincinnati, O.
*J. & F. Harig	Cincinnati, O.
*The M. Marcus Building Co	Cincinnati, O.
*M. J. Roche Construction Co	Cincinnati, O.
N. F. Blair Construction Co	Cleveland, O.
*The Hunkin Conkey Construction Co	Cleveland, O.
*Philip Kirschner Co	Cleveland, O.
Thompson-Starrett Co	Cleveland, O.
*Lundoff-Bicknell Co	Cleveland, O.
*R. H. Evans Co	Columbus, O.
*D. W. McGrath Construction Co	Columbus, O.
*Boyajohn & Barr	Columbus, O.
*Frank Hill Smith, Inc	Dayton, O.
*Shook & Billiter	Dayton, O.
*John W. Boren & Sons Co	Dayton, O.
*W. J. Bellows Const. Co	Oklahoma City, Okla.
The Holmboe Co	Oklahoma City, Okla.
*Kreipke Construction Co	Oklahoma City, Okla.
*Wark Company	Philadelphia, Pa.
*M. Melody & Son Co	Philadelphia, Pa.
*Wm. R. Dougherty	Philadelphia, Pa.
*Turner Construction Co	Philadelphia, Pa.
Wm. Langhorn Co	Philadelphia, Pa.
Sinclair & Grigg	Philadelphia, Pa.
*Hughes-Foulkrod Co	Philadelphia, Pa.
*Nelson Pedley Construction Co	Philadelphia, Pa.
Drehman Paving & Const. Co	Philadelphia, Pa.
*Robert E. Lamb	Philadelphia, Pa.
Stone & Webster, Inc	Philadelphia, Pa.
*U. G. I. Contracting Co	Philadelphia, Pa.
Roydhouse-Arey Co	Philadelphia, Pa.
*T. M. Gibbs	Philadelphia, Pa.
*F. W. Mark Construction Co	Philadelphia, Pa.
Herbert Conway Co	Philadelphia, Pa.
*F. V. Warren Co	Philadelphia, Pa.
Winslow Construction Co	Philadelphia, Pa.
*Mellon Stuart Co	Pittsburgh, Pa.
*Cuthbert Bros. Co	Pittsburgh, Pa.
*W. F. Trimble & Sons Co	Pittsburgh, Pa.
*Hughes-Foulkrod Co	Pittsburgh, Pa.
*H. L. Ley Co	Pittsburgh, Pa.
*Duquesne Construction Co	Pittsburgh, Pa.
*Edw. A. Wehr	Pittsburgh, Pa.
Pittsburgh Eng. & Const. Co	Pittsburgh, Pa.
*J. G. Fullman Co	Pittsburgh, Pa.
Henry Busse & Co	Pittsburgh, Pa.
*Wm. Francis Co	West Chester, Pa.
Berkebile Bros	Johnstown, Pa.
Geo. H. Meinholz	Reading, Pa.
Industrial Construction Co	Scranton, Pa.
*Fiske Carter Construction Co	Greenville, S. C.
Foster & Creighton Co	Nashville, Tenn.
G. B. Howard Co	Nashville, Tenn.
Walsh & Burney	San Antonio, Tex.
San Antonio Construction Co	San Antonio, Tex.
*J. E. Johnson Construction Co	Waco, Texas
John P. Pettyjohn & Co	Lynchburg, Va.
Plate Construction Co	Parkersburg, W. Va.
Hutter Construction Co	Fond du Lac, Wis.
*Immel Construction Co	Fond du Lac, Wis.
*H. J. Selmer Co	Green Bay, Wis.
E. H. Regal	Green Bay, Wis.
J. H. Findorf	Madison, Wis.
Dahlman Construction Co	Milwaukee, Wis.
*Kroening Construction Co	Milwaukee, Wis.
*The Raulf Co	Milwaukee, Wis.
Wm. Winter & Son	Milwaukee, Wis.
*Theo. Stark & Co	Milwaukee, Wis.
*W. W. Oeflein, Inc	Milwaukee, Wis.
Wisconsin Engineering & Const. Co	Wausau, Wis.

* Indicates two or more orders for *Rooshors* have been placed.

WEST PALM BEACH, FLA.

The savings in labor alone with *Rooshors* far exceeded our expectations, to say nothing of the material saved.
Chalker, Lund & Crittenden.

Investment and Repairs

ROOSHORS are made of the very best materials, which money will buy. This insures long life for the product at a minimum upkeep charge.

Below is shown the experience of one contractor, who has kept accurate repair costs. At a conservative figure on savings the *ROOSHORS* paid for themselves on this job. See figures below.

TELEPHONE MAIN 809

REINFORCED CONCRETE BUILDING CONSTRUCTION

KNOLLMAN-SPIDEL FIREPROOFING CO.
INCORPORATED
UNION TRUST BUILDING
WASHINGTON, D. C.

July 28, 1926.

The H. W. Roos Company,
631 Calvert Building, Attention: Mr. W. F. Walker, Jr.
Baltimore, Md.

Gentlemen:-

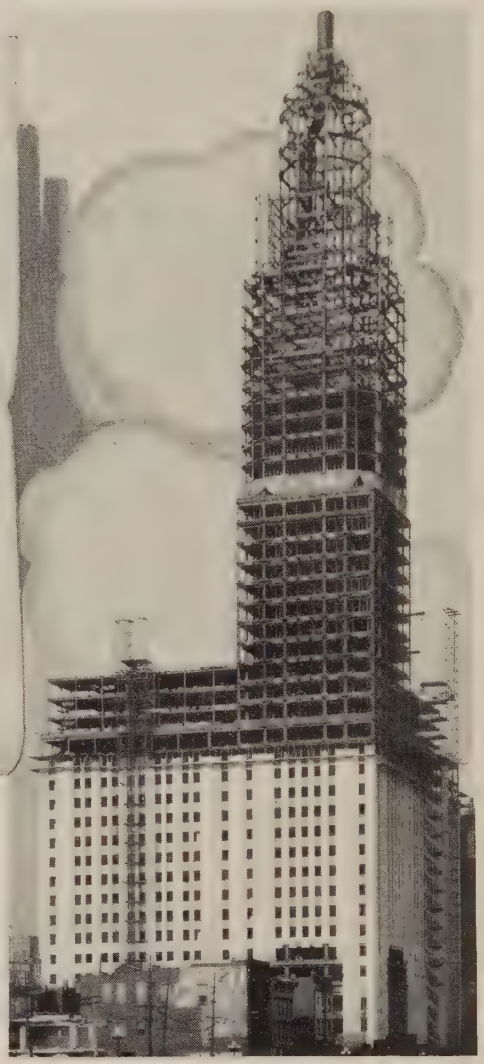
About a year ago we purchased one thousand Rooshors from you and later on we purchased three hundred additional shores. These shores have been used on two jobs, one a four story apartment house in Washington having a total floor area of 184.000 sq. ft., and the other the forty-five story American Insurance Union Building, Columbus, Ohio, having a total floor area of approximately 480,000 sq. ft. The service rendered by these shores has been very satisfactory. The cost of repairs to-date has been approximately $300.00.

Very truly yours,

KNOLLMAN-SPIDEL FIREPROOFING CO.

E. P. Knollman

President.



If *ROOSHORS* saved only 1c per sq. ft. in form costs on the above jobs then:

1c x 664,000 sq. ft. = $6640 *ROOSHOR* Savings

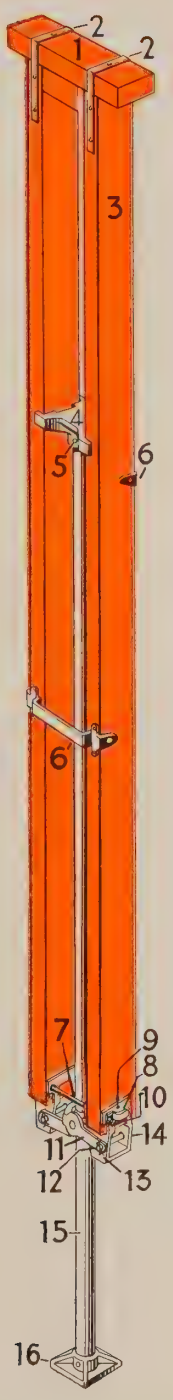
Cost of 1300 shores to contractor	$6069.00
Repair Cost on above jobs	300.00
Total	$6369.00

Conservatively, *ROOSHORS* save 1½c to 2c per sq. ft. of floor area. On some jobs they have saved in labor and lumber as much as 5c per sq. ft. of forms erected.

SAVANNAH, GA.

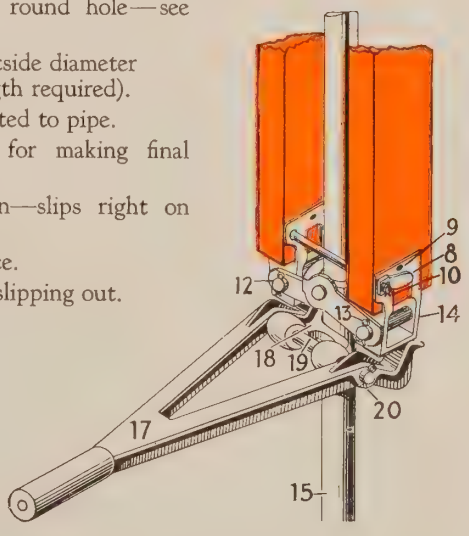
We consider *Rooshors* the best investment we have ever made. They enable us to get more contracts, as we will be able to lower our quotations in figuring jobs.
Artley Company.

Rooshor Repair Parts



In ordering repair parts use the parts numbers as shown on this page. See also page No. 8 for close-up details. Immediate shipment can be made on all repair parts.

1. Head Block—12″ long, securely fastened.
2. Straps—2 16-Gauge galvanized iron straps.
3. Upper Member—2-2 x 4's dressed on all sides—long leaf yellow pine timber. B. & Better.
4. Head Guide—Made of heavily ribbed malleable iron.
5. Rivets—Castings and pipe are riveted to prevent loss.
6. Spreaders—2 Malleable Iron—keep upper members from spreading and warping out of shape.
7. Bolt—½″ carriage bolt, safety lock for clamping.
8. Handled Nut—Malleable Iron—easily tightened—no special wrenches required—just your hands.
9. Rivet—Bearing Shoe riveted to upper member with 5-16 x 2-1-8 rivet.
10. Cotter Pin—In bolts keeps handled nut from being lost.
11. Yokes—A pair of clamping yokes made of heavy malleable iron so designed that the load supported exerts three times as much pressure as is necessary to overcome friction—absolutely automatic lock and can't slip.
12. Pins—Special forged steel pins.
13. Cotter Pins—No nuts to lose.
14. Shoes—Malleable iron bearing shoes riveted to upper member. (Order square hole or round hole—see page 8).
15. Pipe—1¼″ steel pipe—1.66 in. outside diameter Now filled with concrete (give length required).
16. Base—Malleable iron securely riveted to pipe.
17. Jacking Lever—Malleable iron for making final adjustments.
18. Jacking Bracket—Malleable iron—slips right on and off pipe.
19. Shaft—Steel rod for Jacking Device.
20. Cotter Pin—Prevents shaft from slipping out.



SPRINGFIELD, MASS.

Rooshor erection costs are considerably lower than with 4x4s, and they stand up well under the hard usage to which they are subjected on the work. *Fred. T. Ley & Co., Inc*

Years of Satisfaction

ROOSHORS IN SERVICE NINE YEARS

H. C. Hazen Contracting Co. ..... Cincinnati
M. Marcus Building Co. ..... Cincinnati
Walbridge Aldinger Co ..... Detroit
Fisher Devore Co. ..... Cincinnati
Libby, McNeill & Libby Co. ..... Chicago

ROOSHORS IN SERVICE EIGHT YEARS

W. F. Trimble & Sons Co. ..... Pittsburgh
Westinghouse Church Kerr Co. ..... New York
Robt. H. Evans Co. ..... Columbus
Cuthbert Bros. Co. ..... Pittsburgh

ROOSHORS IN SERVICE SEVEN YEARS

Crowell Lundoff Little Co. ..... Cleveland
Otto Misch Co. ..... Detroit
Bryant & Detwiler ..... Detroit
J. & F. Harig ..... Cincinnati
H. D. Watts Co. ..... Baltimore
Realty Construction Co. ..... Flint, Mich.
Frank W. Folz & Co. ..... Cincinnati
H. Harig & Co. ..... Cincinnati
J. & F. Harig ..... Cincinnati
Max Penker & Sons Co. ..... Cincinnati
W. S. Pocock Co. ..... Detroit

ROOSHORS IN SERVICE SIX YEARS

Chas. J. Wacker. ..... Indianapolis
Dupont Engineering Co. ..... Detroit
Otto Misch Co. ..... Detroit
Dwight P. Robinson Co. ..... New York
D. P. Foley ..... Cincinnati
M. J. Roche Construction Co. ..... Cincinnati
R. H. Ruthemeyer ..... Cincinnati
Ferro Concrete Construction Co. ..... Cincinnati
Lundoff-Bicknell Co. ..... Cincinnati
Thompson Starrett Co. ..... Cleveland

ROOSHORS IN SERVICE FIVE YEARS

Arthur Tufts Co. ..... Atlanta
J. W. Snyder Co. ..... Chicago
A. E. Kemmer ..... Lafayette, Ind.
L. W. Hancock ..... Louisville, Ky.
Struck Construction Co. ..... Louisville, Ky.
Frank H. Davis ..... Detroit, Mich.
Owen Ames Kimball Co. ..... Grand Rapids, Mich.
O. W. Jenkins Co. ..... Saginaw, Mich.
Frank W. Folz & Co. ..... Cincinnati
Philip Kirschner Co. ..... Cleveland
Prahl Construction Co. ..... Erie, Pa.
Cuthbert Bros. Co. ..... Pittsburgh
F. H. Goddard ..... Detroit, Mich.

ROOSHORS IN SERVICE FOUR YEARS

C. B. Johnson Co. ..... Chicago
E. P. Strandberg Co. ..... Chicago
Hall Construction Co. ..... Indianapolis
Rath Construction Co. ..... Indianapolis
Bowyer Co. ..... New Castle, Ind.
H. G. Christman Co. ..... Detroit
John Finn & Sons ..... Detroit
John W. Cowper Co. ..... Buffalo, N. Y.
Morris & Allen ..... Buffalo, N. Y.
Braas Bros. Co. ..... Niagara Falls, N. Y.
Laur & Mack Contracting Co. ..... Niagara Falls, N. Y.
Wright & Kremers ..... Niagara Falls, N. Y.
Alexander Shumway & Utz Co. ..... Rochester, N. Y.
Dawson Bros. ..... Syracuse, N. Y.
Hueber Bros. ..... Syracuse, N. Y.
J. & F. Harig ..... Cincinnati
Robt. Harig Construction Co. ..... Cincinnati
Max Penker & Sons Co. ..... Cincinnati
W. A. Hoyt ..... Altoona, Pa.
Jas. Davison ..... Pittsburgh
W. T. Grange Construction Co. ..... Pittsburgh
Landau Bros. ..... Pittsburgh
G. B. Howard Co. ..... Nashville, Tenn.
Immel Construction Co. ..... Fond du Lac, Wis.
Dahlman Construction Co. ..... Milwaukee
Edw. Dreyer ..... Milwaukee
Kroening Construction Co. ..... Milwaukee

CINCINNATI, O.

We have found the *Rooshor* to be one of the best pieces of equipment that we have ever used.

Leibold-Farrell Bldg. Co.

Summary of Advantages in Rooshors

One-Man Shore.
Complete Unit
Absolutely Automatic Lock
Simplicity in Operation
6-ft. Range of Adjustment
Emergency Lock
Weighs Only 66 lbs.
No Wedging
No Loose Parts
Cannot Come Apart
Will Carry Heavy Loads
Only 2 Moving Parts
Fool Proof
Time Saver
Only One Size Required
Will Fit 98 Per Cent Story Heights
Instantaneous Adjustment
Universal Use
Fit Any and Every Type of Slab
For Any Type of Building
Fewer *Rooshors* Necessary
In Use 100 Per Cent of Time
Less Space Required
Eliminate Shoring Worries
Adjustable in Place Up or Down

Saves 75% Shoring Labor
Good for 150 to 200 Uses
Lumber Saver
Concrete Filled Pipe
All Malleable Castings
Malleable Iron Bearing Shoes
Long Leaf Yellow Pine
B & Better Lumber
All Lumber Painted
No Splicing
No Cutting
Speedy Construction
Eliminate Mistakes
Easy to Erect
Standardized Method of Shoring
100 Per Cent Salvage
No Wastage
All Parts Reinforced
Small Breakage
Pay for Themselves Quickly
Seven Hundred Users
Seven Hundred Thousand Used
Hundreds of Repeat Orders
Their Use Indicates Progressiveness

These advantages are only some to be found in the *Rooshor*. You can discover many more yourself on any job. *Your First Cost is the Last.*

PITTSBURGH, PA.

Rooshors eliminate a lot of detail and we assure you that we are very well satisfied.

Mellon-Stuart Co.

Warehousing and Sales Plan

ALSO LONDON, ENGLAND

SALES AGENCIES for *Rooshors* are established in most cities and prompt service from nearby warehouse locations or factory will quickly supply any job.

Write us for agent's name in your territory and nearest warehouse.

Rooshors are rented for a nominal sum on a monthly basis. The contractor can apply sixty days' rental on purchase price, giving him an opportunity of trying them before buying.

MINNEAPOLIS, MINN.

Our first order called for 500 *Rooshors*. This was followed by two repeat orders for 500 each, which is the best recommendation of satisfaction. *Fegles Construction Co., Ltd.*

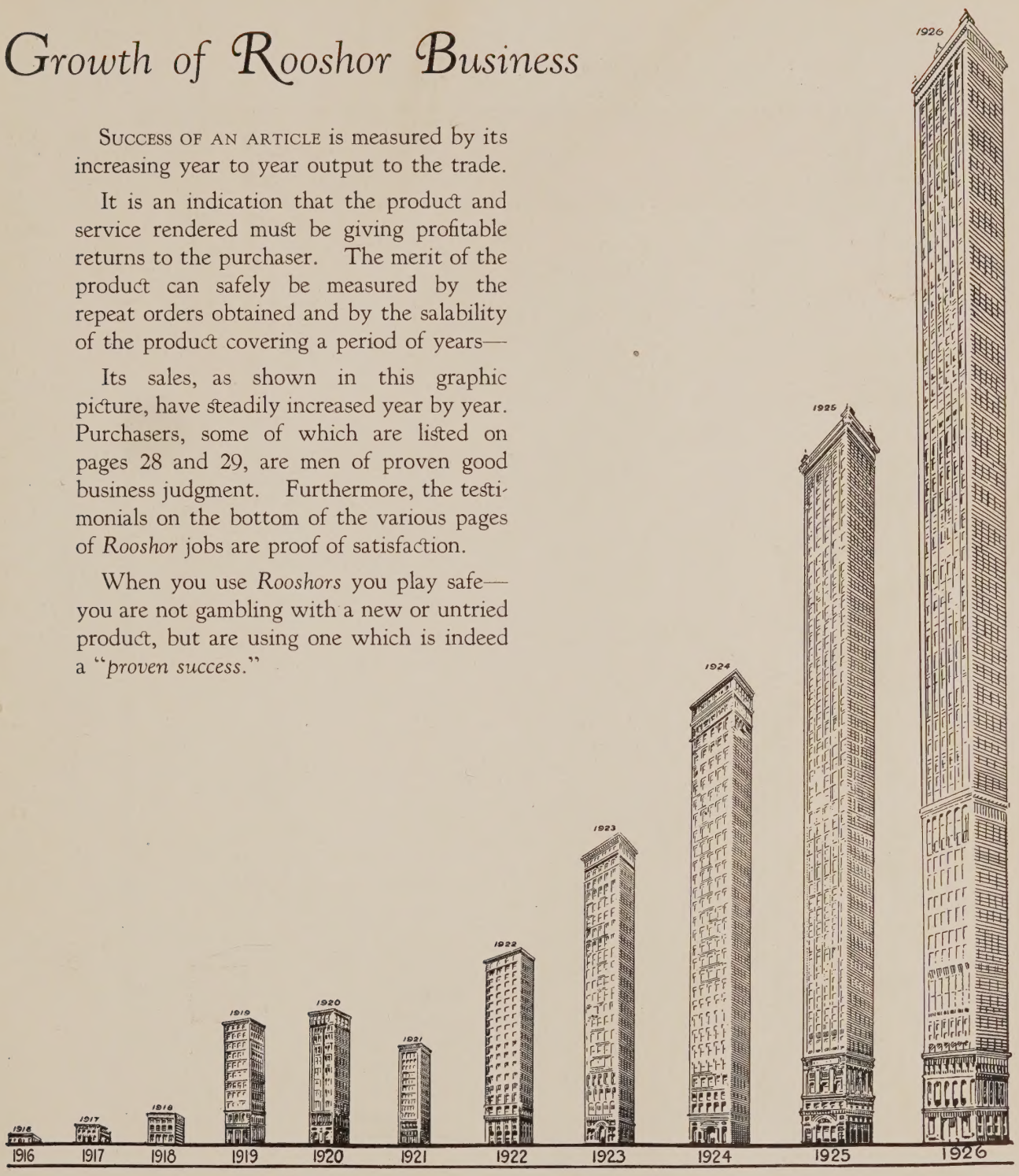
Growth of Rooshor Business

SUCCESS OF AN ARTICLE is measured by its increasing year to year output to the trade.

It is an indication that the product and service rendered must be giving profitable returns to the purchaser. The merit of the product can safely be measured by the repeat orders obtained and by the salability of the product covering a period of years—

Its sales, as shown in this graphic picture, have steadily increased year by year. Purchasers, some of which are listed on pages 28 and 29, are men of proven good business judgment. Furthermore, the testimonials on the bottom of the various pages of *Rooshor* jobs are proof of satisfaction.

When you use *Rooshors* you play safe—you are not gambling with a new or untried product, but are using one which is indeed a "*proven success.*"



DAVENPORT, IA.

Regarding our 3,000 *Rooshors* will say there is undoubtedly a very great saving in lumber and labor accomplished by their use.

Walsh Construction Co.

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IN CONCLUSION please understand that all statements in this booklet represent our honest convictions—all theory has been backed up by practical applications and the longer you study and use our product the more fully you will realize its true value. All we ask is your due consideration.

THE H. W. ROOS COMPANY.
2036-2046 Dana Ave.
Cincinnati, O.

ROOSHOR